Manual

LDMS™

LDMS User Manual

LDMS for the web, version 3.0

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Summary

This manual explains how to use LDMS

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About this manual

This manual explains how to use LDMS for the web.

LDMS is a web-based specimen management tool developed by Frontier Science for small and medium sized research laboratories. It is used by clinics and laboratories around the world to manage specimen tracking, inventory storage, specimen shipment, and much more.

This manual is the authoritative resource for learning to use LDMS for users. It explains many concepts important for using LDMS and provides instructions for using most features.

Note: This manual covers for LDMS for the web. If you are looking for information about LDMS for Windows, it has a separate user manual. Both user manuals can be found on the *LDMS web page*.

Getting started

Getting started

LDMS is a web-based laboratory data management solution used to manage collections of biological specimens.

This manual describes how to use LDMS and is intended for users at laboratories.

About LDMS

LDMS is a web-based data management solution for laboratories managing biological medical specimens.

It is specifically designed for the needs of small and medium-sized research laboratories. It runs in web browser and does not need to be installed on a computer. This means that LDMS can be accessed around the world from many web-enabled devices, such as laptops, tablets, and traditional desktop computers.

LDMS can perform many tasks, including:

- cataloging specimen information, such as its volume, additive, and current condition
- managing the transfer of specimen information between laboratories
- generating labels for specimens
- keeping track of where specimens are located in storage units

Frontier Science manages data for laboratories using LDMS in a secure environment that meets the standards of 21 CFR Part 11 and NIST/FISMA guidelines.

Related sections

LDMS website

About Frontier Science

Frontier Science develops and maintains LDMS, and provides data hosting for laboratories.

Frontier Science and Technology Research Foundation, Inc. is a not-for profit that provides data management services to research organizations. LDMS is one of those data management services. Frontier Science also develops and maintains LDMS, a similar product that is not web-based and requires installation on a computer at the users' laboratory.

Many organizations that utilize LDMS and LDMS also utilize Frontier Science's *data management center* (often referred to as the DMC) in Amherst, New York for long term data storage. These organizations use LDMS and LDMS as a mechanism for sending specimen data for studies to Frontier Science.

Frontier Science is involved in many other statistical research efforts beyond LDMS and LDMS. To learn more about the work that Frontier Science does, visit *https://www.fstrf.org*.

Related sections

Frontier Science website

System requirements

This section lists the system requirements and recommendations for computers connecting to LDMS.

Supported web browsers

- Firefox 24 or higher
- Chrome 13 or higher
- Internet Explorer 9 or higher

For all browsers, JavaScript must be enabled in order to use LDMS. Frontier Science cannot provide user support for web browsers that are not listed, although they may be able to use LDMS without any issues.

Other software

LDMS can generate reports and other types of files in several different formats. Most of these files can be opened by commonly used programs that are already on our computer.

PDF viewer	Needed to view and print reports. Many web browsers have a built-in PDF viewer. You can also download many PDF viewers for free, such as Adobe Reader and Evince

Spreadsheet viewer	Needed to view exportable reports. Microsoft Excel or LibreOffice Calc can open these files.

Recommendations

- Screens resolution at least 1024 pixels wide; if you use a smaller screen size, you will need to scroll right and left to see the full contents of most pages
- Firefox or Chrome; Internet Explorer may not be suited for complex web applications such as LDMS
- A 2D barcode scanner can be used to scan barcode labels to get a specimen's *global specimen ID*.
- A printer for specimen labels

Related sections

LibreOffice website
Adobe Reader website
Evince PDF viewer website
Firefox web browser
Google Chrome web browser

Signing in to LDMS

Sign in to LDMS by using your user name and password, and selecting a laboratory database.

Before you begin

You must have a user account before you can sign in to LDMS.

Procedure

1. In a web browser, go to *https://www.webldms.org*.
2. In the upper-right corner of the page, click **LDMS Login**.
3. Enter your user name and password, and then click the **Login** button.
   The **Select Laboratory** page will open.
4. Select the laboratory from which you want to work from the **Select Lab[oratory]** box.

   You will be working out of the selected laboratory's database for your session. You will only be able to select a laboratory to which you have access.

What to do next

If you want to change to a different laboratory's database after signing in, click the **Change** link next to the laboratory name in the upper-right corner.

Changing users

To switch users from the same web browser, you must log out and log in as a different user.

Background

Although multiple users can sign in and access data from one laboratory's database at the same time, you cannot sign in with multiple users from the same web browser on the same computer. For example, you can sign in as two different users on two different computers using Firefox, but you cannot open a new tab on the same computer and sign in as a different user. Doing so would cause problems with the tab in which you were originally signed in.

Procedure

1. In the upper-left corner of any page in LDMS, click the **Logout** button.
2. Sign in as a different user.

Saving changes when automatically signed out

It is possible to save changes, even when automatically signed out of an idle session.

Background

You will automatically be signed out of LDMS if you leave a page idle for 15 minutes. When this happens, you will receive a notification that you have been signed out. If you attempt to leave the current page, you will be directed back to the sign in page. If you had unsaved changes when you were automatically signed out, those changes will be lost when you are redirected to the sign in page. This is to prevent unauthorized users from saving changes from a session that is signed out.

It is possible to save unsaved changes on a page after being logged out by signing in using another tab in the same web browser.

Procedure

1. Without leaving the page with unsaved changes, open a new tab in your web browser.
2. In the new tab, go to the LDMS sign in page.
3. Sign in as the user with the unsaved changes.
4. Close the new tab.

Results

The original tab with the unsaved changes will now be considered signed in. You will now be permitted to continue working and to save any changes made.

Downloading files

Different web browsers have different way of handling file downloads.

Many modern web browsers are configured by default to try to open certain types of files automatically or download them to a default location. For example, by default Firefox will attempt to open PDF files using a built-in PDF viewer. Likewise, Chrome is configured by default to save file downloads to a default location without asking you where to save them.

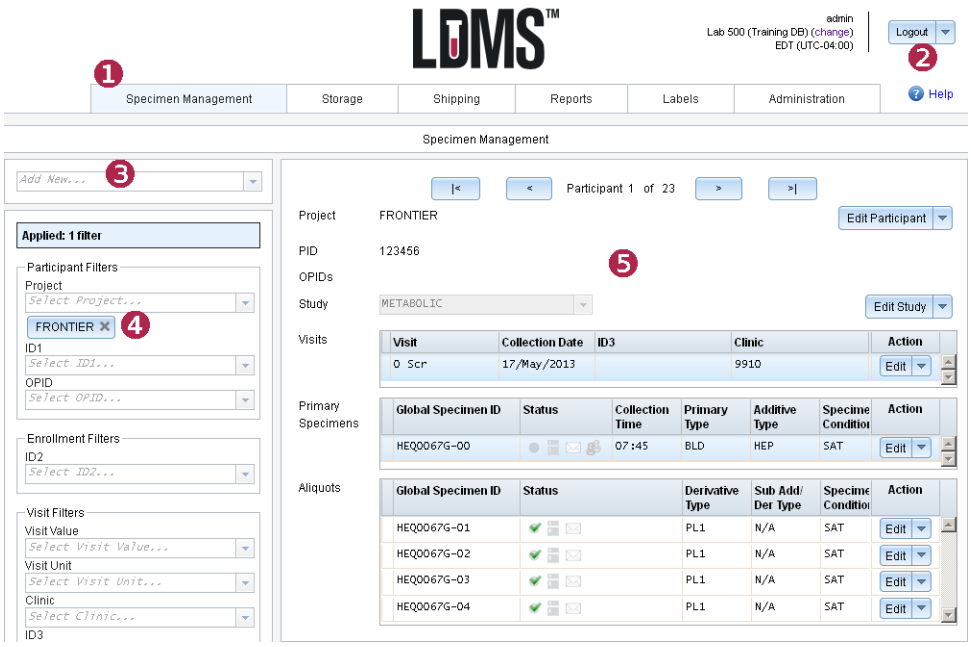
There are many times that LDMS will provide a file for you to download, such as a shipping file. Since you need to know where the file is on your computer in order to provide it to another laboratory, it is helpful to understand how your web browser handles file downloads.

How to view and modify your browser's behavior for downloading files or opening files automatically will vary by browser and version. For instructions, consult the help documentation for your web browser.

The LDMS user interface

The LDMS user interface has many common elements across different pages.

Figure 1: The main LDMS user interface



(1) The LDMS menu bar, (2) The action menu, (3) An applied filter, (4) Currently viewed participant, (5) Specimens, (6) Sign out or switch laboratories

LDMS menu bar The menu bar is used to navigate between different tasks in LDMS. Hover the mouse pointer over a page to see its sub-pages.

filters	Filters are available on most pages and will limit the information that is displayed in the working area on the page. For example, if you are on the **Specimen Management** page and apply a filter with the value `FRONTIER` to the **Project** field, only participants enrolled in the FRONTIER project will be displayed. The filters that are available will vary, depending on the current page. To remove a filter after it has been applied, click on it.
action menu	The action menu is used in various areas of LDMS to perform a major task. For example, on the **Specimen Management** page, the action menu is used to create a new participant.
signing out	To sign out of LDMS as the current user, click the **Logout** button in the upper-right corner. This button is available on every page.
change databases	To change to a different laboratory database, click the **Change** link in the upper-right corner next to the laboratory name.

Applying filters to a page

Filters are available on several pages and are used to narrow down the information that is displayed so that you can find something.

Background

On many pages in LDMS, all information for a particular task will be displayed together. For example, if you are on the Specimen Management page, all participants in your laboratory's database will be displayed. If your laboratory has information for 200 participants, all 200 will be displayed by default and you would need to page through each one to find what you are looking for.

Filters can be used to temporarily limit the amount of participants shown so that only records of interest are displayed. This is the primary way to search for items in LDMS.

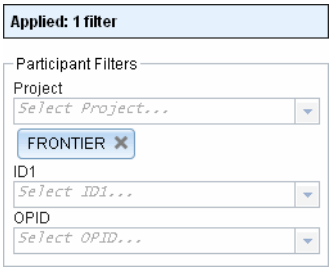
Procedure

1. Open a page with filters, such as the **Storage** or **Specimen Management** pages.

   Filters are displayed in the filters panel on the left side of the page, below the action menu.
2. Locate the desired filter.

Filters are grouped into categories, such as visit filters and specimen filters. Some categories will be specific to the current page. For example, the storage container filters will only be available on the **Storage** page.

Figure 2: The filters panel



In this example, the FRONTIER filter has already been applied to **Project**. This means that only information for that project will be displayed.

3. Select or enter the information to be shown from the filter box.

   You can either select the information to filter from this list or enter it into the box. Filters will automatically show available options as you type.

   Note: Filters do not affect other filters. For example, if you select the FRONTIER group, then try to apply a filter for **ID1**, all ID1 values in the laboratory's database will be available for selection, even if they don't below to the FRONTIER group.

Results

The filter will be applied immediately once it is selected and the page will automatically refresh to remove any records that do not meet the filter's criteria. If two filters were selected, they will both be applied using "and" logic. For example, if you selected FRONTIER from the **Project** filter and BLD from the **Primary type** filter, only blood specimens for the FRONTIER project will be displayed..

What to do next

To remove a filter that has been applied, find it in the filter panel on the left side of the page and click on it. It will be removed immediately and the page will automatically be refreshed to reflect the change.

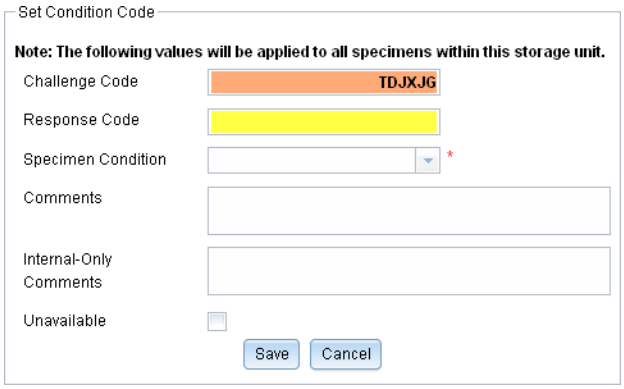
Challenge codes

A challenge code is password that you must give to LDMS User Support to perform certain actions in LDMS.

Access to certain features in LDMS may be restricted for a number of reasons. For example, changing all of the specimens in a storage unit to the DSR (destroyed) condition code can have very serious consequences. LDMS does not provide "undo" functionality to reverse such an action. A challenge code is a fail-safe mechanism that can prevent accidental changes to specimen data.

If you attempt to access a feature locked with a challenge code, LDMS will prompt you for the response code.

Figure 3: Prompt for challenge password



In this example, you would provide LDMS User Support with the code BKPRMY and they will provide you with the **Response Code** to access this feature.

You must contact LDMS User Support and give them the **Challenge Code**. If appropriate, they will provide you with the response code which will then unlock the feature for your use. The code will change each time the feature is accessed, and will be needed even if the feature was previously unlocked.

Warning: Do not close the challenge password window before you obtain the **Response Code**. Doing so will cause a new **Challenge Code** to be generated, which will require a different **Response Code**.

Specimen Management

Specimen management

The Specimen Management page is where you can manage the details of specimen records and related information for participant enrollments.

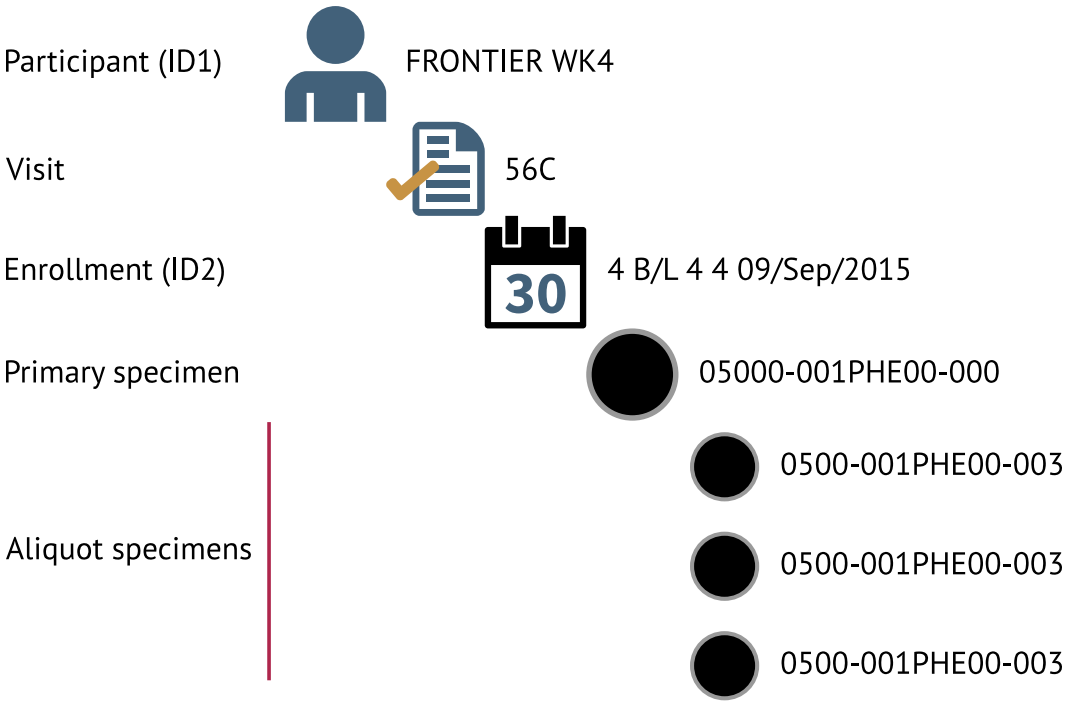
In LDMS, a participant, an enrollment, and specimens drawn from a participant (including the specimens derived from them) form a specimen record. Specimen records are added and displayed on the Specimen Management page.

Terms used in LDMS

Specimen records are stored as a hierarchy of related participant, enrollment, and information. All of this information for a participant-project combination comprise a record in LDMS.

A *specimen record* in LDMS is the collection of specimen, study, and visit information for a specific participant.

Figure 4: Contents of a specimen record



The top of a specimen record represents the largest part, such as a clinical trials network; the right side of this image is an example of each item

project	The organization that sponsors or conducts the study in which the participant is enrolled.
participant	The person (or specimen source if the project doesn't work with human samples) that is participating in a given project. If a person is participating in more than one project, they will be considered two different participants in each project. Participants cannot be linked across projects.
enrollment	The protocol or study in which the participant is enrolled.
visit	A specific event at which a primary specimen was collected from a participant.
primary specimen	The specimen that was collected from the participant, such as an unprocessed tube of blood
aliquot	A specimen that was created by processing a primary specimen into a smaller specimen.

Each part of a specimen record is selected in sequence. For example, you must specify a project before enter participant information. Likewise, you must create the information for a visit event before you can add specimens that were drawn at that visit.

Related sections

Participant identifiers on page 21

A participant identifier is a series of numbers and letters that uniquely identifies a participant within a specific project.

Visit identifiers on page 27
A visit identifier defines the type of visit.

Specimen identifiers on page 29
All specimens in LDMS are assigned a unique specimen identifier.

Specimen record details on page 42
This section describes each specimen record entry box that appears on the Specimen Management page.

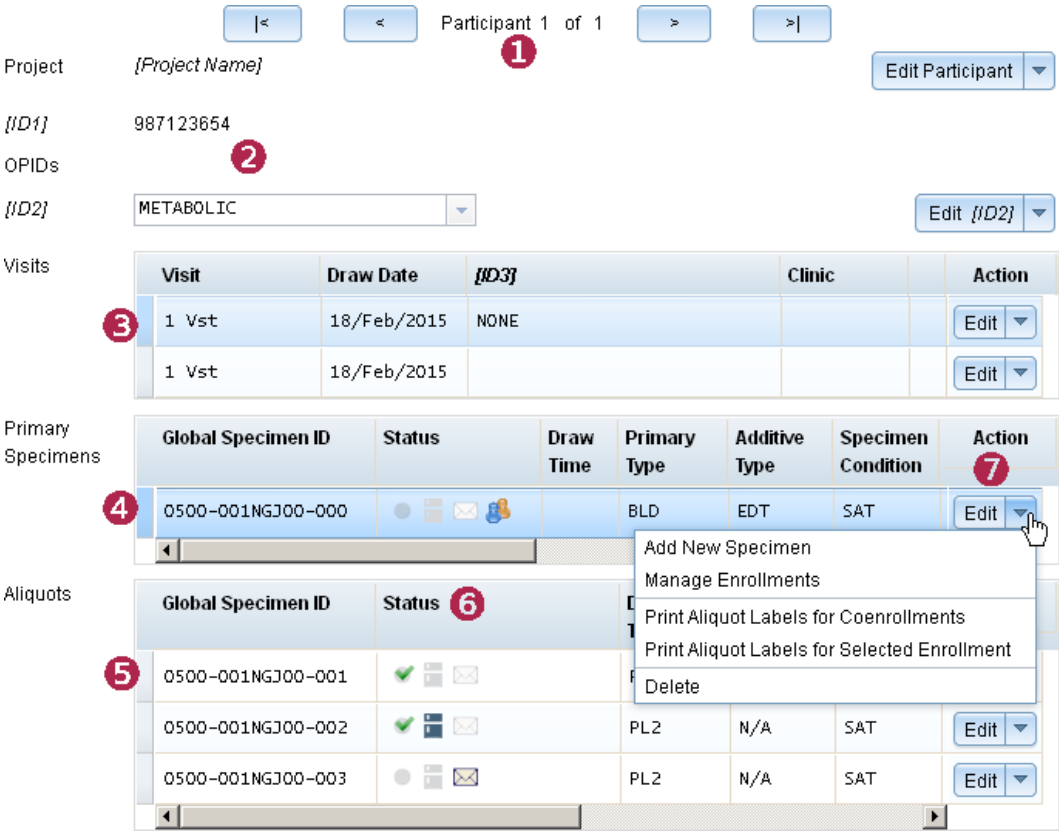
Navigation on the Specimen Management page

The **Specimen Management** page shows all of the visits for a specific participant and protocol combination.

Important: The labels for certain buttons and menus in LDMS vary based on the project. For one participant, for example, the unique participant identifier (ID) may be called “PID”; for another project it may be “PanelID”.

The main work area of the Specimen Management page will display the all the visits and associated specimens for a participant. Use the navigation buttons to change between different participants.

Figure 5: The Specimen Management page



(1) Navigate between participants, (2) The current participant's enrollment information, (3) Visits for the current participant, (4) Primary specimens for the currently selected visit, (5) Aliquot specimens derived from the currently selected primary specimen, (6) Specimen status indicators, (7) Actions for a primary

Status Icon	Meaning
	Specimen is available
	Specimen is assigned a storage location
	Specimen has been shipped to another laboratory
	Specimen has an additional enrollment

To change participants... ... click the navigation buttons at the top of the screen.

To view the visits for a different study ... select the study from the **Study** drop-down box.

that the participant is enrolled in...	**Note:** If the **Study** box is disabled, then the participant is only enrolled in one study.
To see the primary specimens associated with a visit...	... click a visit from the **Visits** section of the page.
To see the aliquots associated with a primary specimen...	... click a primary in the **Primary Specimens** section.
To search for a specific participant...	... use the filters on the left-side of the page.

Related sections

The LDMS user interface on page 13
The LDMS user interface has many common elements across different pages.

Entering specimen information (Overview)

Records are added to LDMS from the top-down, starting with the creation of a new participant.

Background

Because records in LDMS are hierarchical, you need to enter information starting with a participant, and then work you way down to aliquot specimens.

There are two ways to enter participant, enrollment, and specimen in LDMS:

- Using the Quick Add feature (recommended)
- Adding new participant, enrollment, and specimen information one-by-one

For most data entry in LDMS, the Quick Add feature is strongly recommended since it allows you to enter all of the information at once. Adding individual items on the **Specimen Management** page is recommended for minor changes, such as adding a single aliquot specimen to a primary specimen.

Each of the steps below can be completed independently, provided that the previous steps were completed. For example, you can create a new participant in LDMS without enrolling that participant in any protocols or creating any associated visits, however you cannot create a generic enrollment that is not associated with a specific participant visit. Likewise, it is also not possible to create a primary specimen without associating it with a specimen participant's visit.

Procedure

1. Create a new participant.

Participant's are specific to a project. If a person is participating in more than one project, then they would be considered two different participants in LDMS and would be entered separately.

2. Add an enrollment to the participant.

   This means that you are associating the participant with a specific protocol. Participants can be associated with multiple protocols.
3. Add a visit to the participant.
4. Add a primary specimen to the visit.
5. Add aliquots that were processed from the primary specimen.

Participants

A participant is the source for a specimen entered into LDMS.

The participant is typically a person enrolled in a study. Similar terms that you may be familiar with include "patient" and "source". In LDMS, a participant refers to all of these concepts. This means that a participant does not necessarily need to be a person. For example, a "participant" may be a control sample from which a specimen was created.

In LDMS, a participant will be the first thing that you create when adding a new *specimen record*. Newly created participants must be associated with a project and an ID1 (or participant identifier).

If a person is taking part in more than one project, that person will be considered two different participants in LDMS.

Participant identifiers

A participant identifier is a series of numbers and letters that uniquely identifies a participant within a specific project.

A participant identifier is called "ID1" in LDMS until you select a project for the participant. Each project will have a different name for ID1. For one project, it may be called "PID"; for another project, it may be called "PANEL".

Adding participants using the Specimen Management page

A new participant can be created on the **Specimen Management** page or the **Quick Add** page. This section explains how to add them on the Specimen Management page.

Background

A new participant can be created two ways:

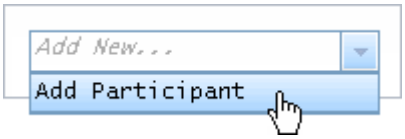
- If you want to create a new participant without any enrollments or visits, use the **Specimen Management** page.
- If you want to create a new participant allow with an associated visit and specimens, use the **Quick Add** feature.

The Quick Add feature requires you to enter at least one visit date with the participant. If the participant has not yet had a visit, you must use the Specimen Management page.

Procedure

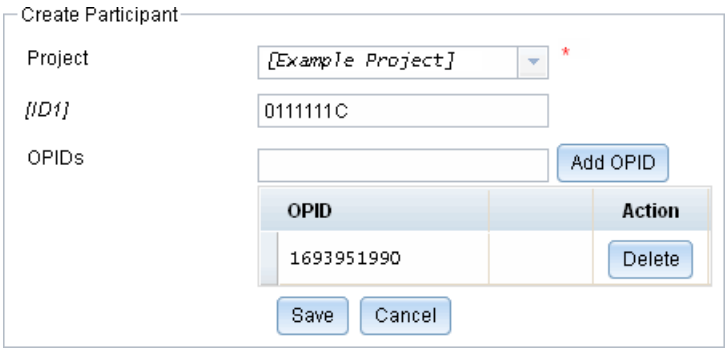
1. From the LDMS menu bar, click **Specimen Management**.
2. From the action menu in the top-left of the page, click **Add Participant**.

   Figure 6: The action menu with Add Participant selected

3. From the **Project** box, select a project.

   Figure 7: The Create Participant page

   The **ID1** box will change to appropriate name for the selected project.
4. In the **ID1** box, enter the participant's identifier.

   The label for the **ID1** box will vary by project. In the example above, ID1 is "PID".
5. Optional: In the **OPIDs** box, enter an *other participant identifier*, and then click **Add OPID**.

   More than one OPID can be added for the same participant. To removed an OPD that was added, click the **Delete** button to the right of it.
6. Click **Save**.

   If the project has validation checks for ID1, they will be run at this time. If the ID1 that you entered is not valid for the project, you will be prompted to correct it before you can save the new participant.

   LDMS will also verify that the participant with the same ID1 does not already exist in the project. If the participant does exist, you will receive an error message. Close the window and use the filters on the **Specimen Management** to locate the existing participant.

Results

The new participant will be created and added to the end of your laboratory's database. For example, if your laboratory previously had 250 participants, the new participant will be 251. LDMS will automatically open the record for the newly created participant so that you can add enrollment information.

Related sections

Entering specimen information (Overview) on page 20

Records are added to LDMS from the top-down, starting with the creation of a new participant.

Quick add on page 37
The quick add feature allow you to create all of the specimens from a participant visit at once, and is the preferred method for entering new visits in LDMS.

Adding participants using Quick Add

The Quick Add feature can be used to add a new participant, along with other information, on a single page.

Background

If adding a participant in this way, at least one visit must have occurred as the date of the visit (the **Collection Date**) is required.

Procedure

1. From the LDMS menu bar, click **Specimen Management** > **Quick Add**.
2. Optional: Select a template for the participant visit.
3. Complete the information in the **Participant Information** section.
4. In the **Visit Information** section, enter the **Collection Date**.
5. At the bottom of the page, click **Add**.
6. Optional: Complete any additional enrollment, visit, or specimen information for this participant.

Results

When the participant is successfully created, a note will appear at the top of the page. The participant will be available for select on the **Specimen Management** and **Quick Add** pages, where new enrollments, visits, and specimens can be added.

Related sections

Quick add on page 37
The quick add feature allow you to create all of the specimens from a participant visit at once, and is the preferred method for entering new visits in LDMS.

Modifying a participant

Modify participants on the **Specimen Management** page.

Background

A *participant* may need to be modified to correct an error in the ID1 that was entered, or to add and remove *OPIDs* as needed.

Procedure

1. Click **Specimen Management** from the LDMS menu.
2. Find the participant to be modified.

Use filters from the left side of the screen to narrow down the participants that are displayed.

3. With the participant open in the work area, click the **Edit Participant** button.
   The **Edit Participant** window will open.
4. Modify any participant information as needed.

   The **Enrollments** section of this window was not present when the participant was first created. It lists protocols in which the participant is enrolled, and provides a link to view and modify that enrollment, if needed.
5. Click the **Save** button.
   If you modified the participant identifier, LDMS will check to ensure that it does not already exist for another participant.

Enrollments

An enrollment associates a participant with a protocol.

For example, a participant in the `Frontier` project may be participating in a study called `F1526`. The combination of that participant identifier on that study is called the *enrollment*.

A protocol is called ID2 in LDMS. Like ID1 for participant identifiers, the name for ID2 will vary, depending on the project. For example, a vaccine project may call the protocol box in LDMS “STUDY”, whereas a pharmacology project may call it “TEST PANEL”.

Also like ID1, a project may have rules for how its ID2 is formatted. For example, a vaccine project may require that protocols are in the format “STUDY 201”, “STUDY 202”, and so on; a pharmacology project may use “TEST PANEL A0003”, “TEST PANEL A0004”, etc. If the project has specified these rules, they will be enforced by LDMS.

A participant can be enrolled in more than one ID2 for a project, however because participants are specific to a project, they cannot be enrolled in protocols across multiple projects.

Adding enrollments using the Specimen Management page

Enrollments are added to an existing participant, and associate that participant with a specific protocol.

Before you begin

The participant must already exist in LDMS before an enrollment can be added.

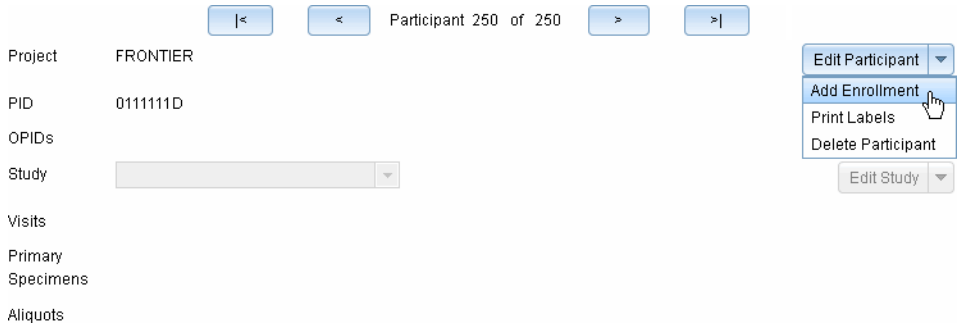
Procedure

1. From the LDMS menu bar, click **Specimen Management**.
2. Find the participant.

   Use filters from the left side of the page to narrow down the participants that are displayed.

3. From the **Edit Participant** menu, click **Add Enrollment**.

   Figure 8: Adding a new enrollment to a participant



   In this image, ID2 is called "Study"

   The **Create Enrollment** window will open.

4. Select or enter an **ID2** in the box.

   The label for this box will vary, depending on the project. It is most commonly called **Study** or **Protocol**.

5. Click **Save**.

Results

The participant is now enrolled in the protocol. You will see the protocol listed in the **ID2** box.

What to do next

If the participant is enrolled in more than one protocol for a project, you can create additional enrollments in the same way.

Related sections

Entering specimen information (Overview) on page 20
Records are added to LDMS from the top-down, starting with the creation of a new participant.

Quick add on page 37
The quick add feature allow you to create all of the specimens from a participant visit at once, and is the preferred method for entering new visits in LDMS.

Modifying enrollments

Participant enrollments can be modified or removed after they are created on the **Specimen Management** page.

Before you begin

- If removing an *enrollment* from a *participant*, the enrollment must not have any associated *visits*.
- If you accidentally added a visit and specimens to the enrollment in error and you want to preserve them, co-enroll the specimen(s) in another enrollment first so that the erroneous enrollment can be removed..

Background

The only property of an enrollment is the associated *ID2*. If the incorrect ID2 was selected when the enrollment was created, you can change it. Doing so will add the participant to a new enrollment, not change the existing. For example, if a participant is currently assigned an ID2 of STUDY3, and you change it to STUDY4, this change will only affect this participant, not all participants in STUDY3. If the enrollment was added in error, it can be deleted instead.

Note: Enrollments can also be modified using Quick Add.

Procedure

1. In the LDMS menu bar, click **Specimen Management**.
2. Find the participant with the enrollment to be modified.

   Use filters from the left side of the screen to narrow down the participants that are displayed.
3. Select the ID2 from the ***[ID2]*** box.

   The label for the **[ID2]** box will depend on the project. Common labels are “study” and “protocol”.
4. To modify the enrollment:
   a) Click **Edit *[ID2]***, where “[Protocol]” is the appropriate label for the project.
   b) Modify the enrollment as needed.
   c) Click **Save**.
5. To remove the enrollment:
   a) From the **Edit *[ID2]*** menu, click **Delete *[ID2]***.

      Figure 9: The Edit Study menu

      In this image, ID2 is “Study”
   b) Click **Delete**.

Visits

A visit is a specimen collection event associated with an enrollment.

A visit typically involves the collection of specimens defined by the protocol. For example, a visit may specify that you collect 3 tubes of blood from the participant. In LDMS, you would add the visit to the participant, and then add the specimens to the visit.

Visit identifiers

A visit identifier defines the type of visit.

A visit is identified by two pieces of information: the *visit value* and *visit unit*. The visit value is a sequential identifier, such as a number. The visit unit is the type of *visit*.

For example, a visit of "3 WK" indicates that it is the third visit of the week type. The 3 is the visit value, and WK is the visit unit. The protocol in which the participant is enrolled likely has defined specimen collections for this visit.

The available visit units are defined by various projects that use LDMS. Users cannot create their own visit units.

Related sections

LDMS abbreviated codes report on page 97
Provides a list of LDMS unit, visit, time, specimen condition codes used in LDMS and their meaning.

Adding a visit to an enrollment

Visits are added to an enrollment on the **Specimen Management** page.

Background

A visit must be created before you can enter specimen information in LDMS.

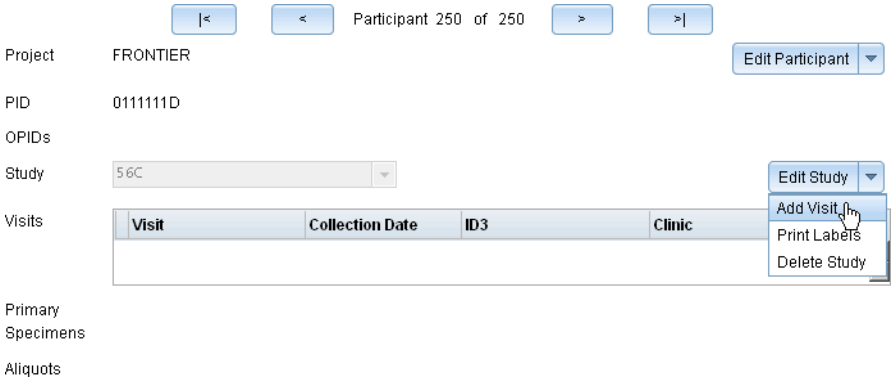
Tip: If you want to create a new visit for a specimen that already exists, you should co-enroll the primary specimen instead of adding a new visit to the enrollment. During the co-enrollment process, you will have the opportunity to create a new visit.

Procedure

1. Click **Specimen Management** from the LDMS menu bar.
2. Find the participant to which a visit will be added.
   Use filters from the left side of the page to find the participant.
3. Select the **[ID2]** from the list.
   The label for the **[ID2]** box will depend on the project. Common labels are "study" and "protocol".

4. Click the down arrow next to the **Edit [ID2]** button, and then click **Add Visit**.

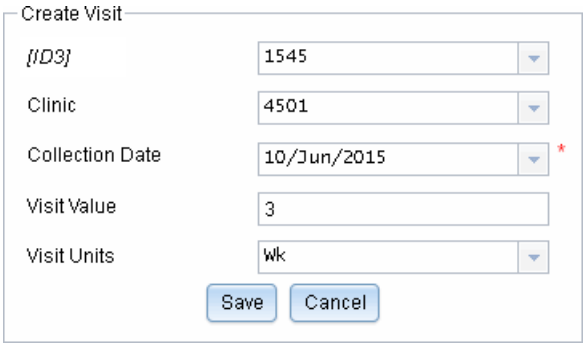
Figure 10: The Edit Study menu



In this image, the label for ID2 is "Study"

The **Add Visit** window will open.

Figure 11: The Add Visit window



5. Select the clinical site where the visit occurred from the **Clinic** list.

   If you want to know the name of the site, hover over it with the mouse pointer.

   Note: The list of clinics and clinic ID numbers are maintained by Frontier Science and cannot be modified by users. For more information, contact LDMS User Support.

6. (If required by the project) Select the *ID3* from the **ID3** list.

   ID3 is typically used for a sub-study or sub-protocol.

7. Select the date that the visit occurred from the **Draw Date** list.

   If the visit occurred over more than one day, you must add a new visit for each date.

8. Enter the *visit value* and *visit unit* for the visit into the **Visit Value** boxes.

   If you want to see what a particular visit unit means, hover over it with the mouse pointer.

9. Click the **Save** button.

Related sections

Entering specimen information (Overview) on page 20

Records are added to LDMS from the top-down, starting with the creation of a new participant.

Quick add on page 37
The quick add feature allow you to create all of the specimens from a participant visit at once, and is the preferred method for entering new visits in LDMS.

Modifying visits

Visit information is modified or removed on the **Specimen Management** page.

Background

You may need to modify a visit after it is created to correct an entry error (for example, using the incorrect clinic). If the visit was added in error, you can also remove it.

Procedure

1. Click **Specimen Management** > **Available Specimens** from the LDMS menu bar.
2. Find the participant with the visit to be modified.

   Use filters from the left side of the screen to narrow down the participants that are displayed.
3. Select the *protocol/ID2* associated with the visit from the **[Protocol]** box.

   The label for the **[Protocol]** box will depend on the *project*. Common labels are “study” and “protocol”.
4. To modify the visit:
   a) Click the **Edit** button to the right of the visit.
      The **Edit Visit** window will open.
   b) Modify the visit information as needed.

      If a primary specimen has already been entered for the visit, it will be listed along with the visit information.
   c) Click the **Save** button.
5. To remove the visit, select **Delete** from the **Edit** menu to the right of the visit.

   In order to remove the visit, there must be no primary specimens added to it. If you want to remove a visit without deleting the primary specimens, you can co-enroll the primary specimen. This will allow you to associate the specimen with another visit.

Primary specimens

A primary specimen is a specimen that was collected from a participant during a visit.

Primary specimens are generally larger specimens that are later processed into smaller specimens called aliquots. New primary specimen are added to LDMS on the **Specimen Management** page. They are always associated with at least one participant visit.

Specimen identifiers

All specimens in LDMS are assigned a unique specimen identifier.

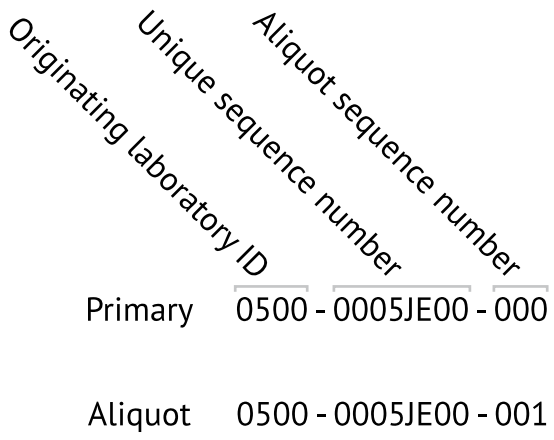
There are three types of specimen identifiers that can appear in LDMS:

global specimen ID	This is a unique identifier assigned to all specimens.
specimen ID	This identifier may or may not be unique. It is only used by LDMS; LDMS will not assign a *specimen ID* to specimens added using LDMS.
other specimen ID	This identifier is intended for laboratories to use to assign their own, internal-use identifiers as needed.

Important: LDMS for Windows and LDMS for the web use different formats for the global specimen ID. The format used by LDMS is longer, and contains the originating laboratory's ID. For example, the global specimen ID "0500-0005JE00-000" indicates that the specimen originated from LDMS laboratory 500.

The global specimen ID assigned by LDMS links a primary specimen to any aliquot specimens created from it. Primaries and aliquots derived from them will have the same global specimen ID up to the dash character. The last three numbers are the sequence number. A sequence number of "-000" indicates that the global specimen ID belongs to a primary specimen; any other number indicates that it belongs to an aliquot specimen.

Figure 12: The global specimen ID of primary and aliquot specimens



This image shows the relationship between a parent primary and aliquots derived from it.

Related sections

Specimen identifiers in LDMS for Windows on page 30
LDMS for Windows handles specimen identifiers in a few ways that differ from LDMS.

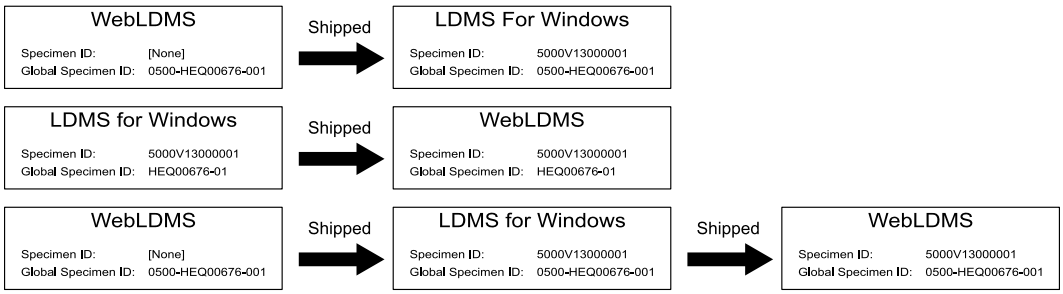
Specimen identifiers in LDMS for Windows

LDMS for Windows handles specimen identifiers in a few ways that differ from LDMS.

Understanding the differences between the way LDMS and LDMS for Windows assign specimen identifiers is important if your laboratory does work with other laboratories.

LDMS will not assign a *specimen ID* to a specimen and will only assign a *global specimen ID*. LDMS for Windows will assign both. The format of the global specimen ID differs as well, depending on which system assigned it.

Figure 13: Specimen ID and global specimen IDs interoperability

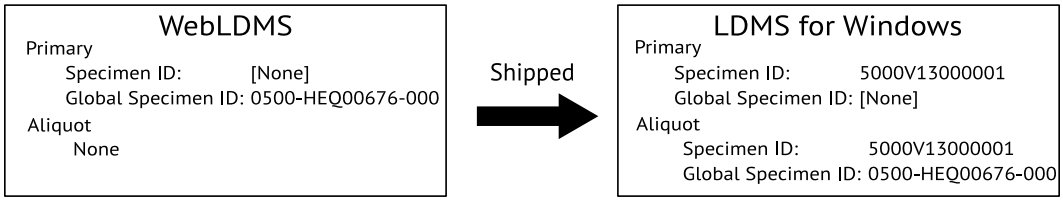


This image shows how specimen IDs and global specimen IDs are affected as specimens are shipped between LDMS and LDMS for Windows.

The global specimen ID of a primary specimen can be different. LDMS for Windows does not permit the shipping or storage of primary specimens; these are features that are exclusive to LDMS. In LDMS for Windows, users would generally create aliquots (commonly called “ghost aliquots”) that were identical to the primary specimen; the aliquot (which was really just the primary) could then be shipped and stored.

When a primary specimen is shipped to LDMS for Windows, an aliquot will automatically be created. This aliquot will have the global specimen ID of the primary specimen, and the primary specimen ID will have no global specimen ID.

Figure 14: Primary specimens shipped to LDMS for Windows



This image shows how a primary specimen without aliquots created in LDMS for the web is converted to an aliquot if shipped to an LDMS for Windows laboratory.

In this situation, if the new aliquot is shipped to a laboratory that users LDMS for the web, it will recognize that the global specimen ID belongs to a primary specimen (and not an aliquot), and will turn it back into a primary specimen.

Related sections

Specimen identifiers on page 29
All specimens in LDMS are assigned a unique specimen identifier.

Adding a primary specimen to a visit

A new primary specimen is added to a visit on the **Specimen Management** page.

Background

A primary specimen is added to an existing visit. The primary specimen can be added in LDMS even if it has not yet been processed into any aliquots.

Procedure

Locate and select the visit

1. Click **Specimen Management** from the LDMS menu.
2. Find the participant to which the primary specimen will be added.

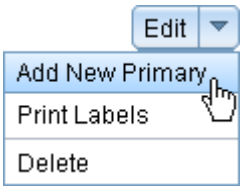
   Use filters from the left side of the screen to narrow down the participants that are displayed.
3. Select the ID2 associated with the visit from the **[ID2]** box.

   The label for the **[ID2]** box will depend on the *project*. Common labels are “study” and “protocol”.

Add the new primary specimen

4. Click the down arrow next to the **Edit** button to the right of the visit to which the primary will be added, and then click **Add New Primary**.

   Figure 15: Adding a new primary to a visit

   The **Create Specimen** window will open.
5. Fill in the information for the new primary specimen.

   Items marked with a red * are required.
6. Optional: Enter additional information about the primary specimens into the **Comments** box.

   Information that is typically included here includes details for specimens that were not collected, an explanation of a condition, or an explanation of why a specimen is not available.
7. Optional: Enter additional information about the primary specimens into the **Internal-only comments** box. These comments will be include if the specimen’s information is shipped to another laboratory.

   Comments entered here is for your laboratory’s use only. These comments will not be included if the specimen’s information is shipped to another laboratory.
8. At the bottom of the window, click **Save**.

   The information you entered will be checked for completeness and validity.
   If there is an issue with one of your entries, it will be highlighted with a brief explanation of how to correct it.

Results

A new primary specimen is now available. It will automatically be assigned a global specimen ID ending in “-00” by LDMS.

Note: The new primary will not have a specimen ID assigned to it. Specimen ID is only used by LDMS; LDMS uses the global specimen ID, not specimen ID, to identify specimens

What to do next

If the primary was collected for more than one protocol or project, you must also co-enroll the specimen so it is associated with each applicable visit.

Related sections

Entering specimen information (Overview) on page 20
Records are added to LDMS from the top-down, starting with the creation of a new participant.

Quick add on page 37
The quick add feature allow you to create all of the specimens from a participant visit at once, and is the preferred method for entering new visits in LDMS.

Co-enrolling a primary specimen

Co-enrolling is the process of associating a primary specimen with more than once visit or protocol.

Background

A participant may be participating in two different protocols at the same time, and a single primary specimen might be collected to meet the needs of a visit from each protocol.

You can also co-enroll a primary specimen to move it between visits. This might happen, for example, if you selected the wrong visit for the primary specimen, and you want to move it to the correct visit rather than deleting it.

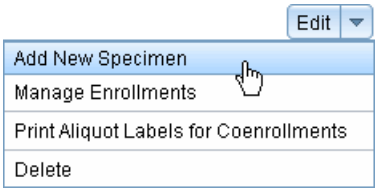
Procedure

1. In the menu bar, click **Specimen Management**.
2. Local the specimen to be co-enrolled.

   Use filters from the left side of the screen to narrow down the participants that are displayed.

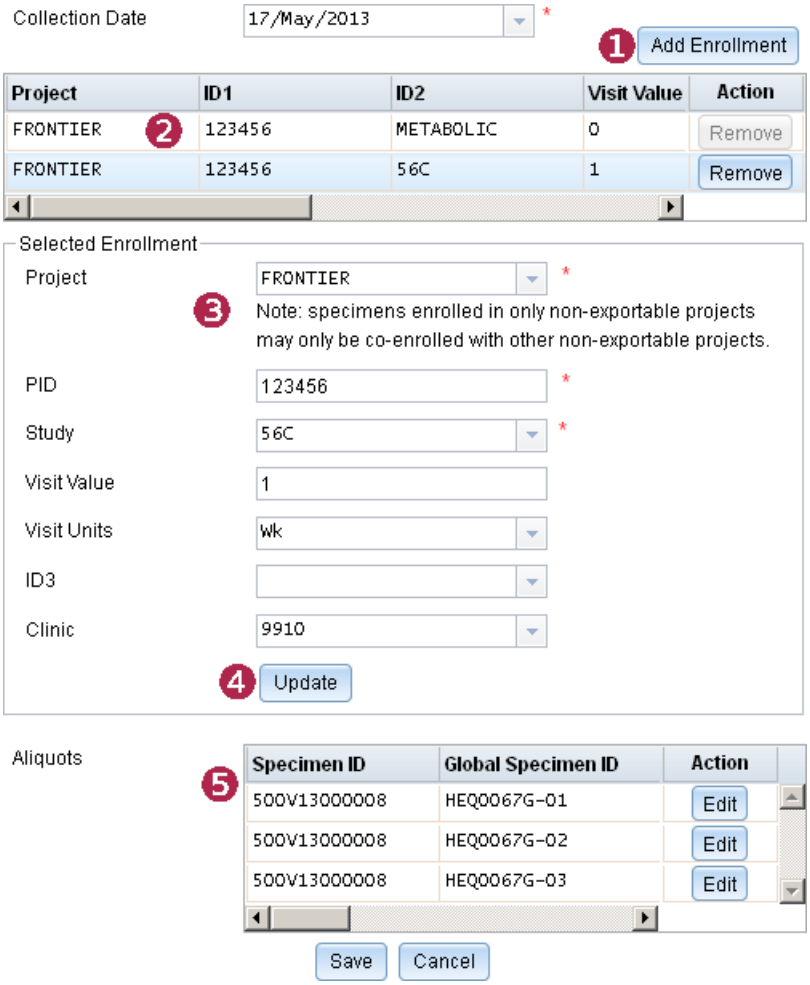
3. Click the down arrow next to the **Edit** button to the right of the primary to be co-enrolled, and then click **Manage enrollments**.

Figure 16: The Edit button for a primary



The **Manage Enrollments** window will open.

Figure 17: The Manage Enrollments window



(1) Add a blank enrollment row, (2) Enrollments for this primary specimen, (3) Details for currently selected enrollments, (4) Save changes to currently selected enrollment, (5) All aliquots derived from this primary, including all enrollments

4. Click the **Add Enrollment** button.
5. Select the blank row created in the previous step by clicking on it.
6. Fill in the information in the **Selected Enrollment** section for the new enrollment.
7. Click **Update**.

The information for the enrollment will be updated in the list of enrollments.

8. At the bottom of the window, click **Save**.

Modifying a primary specimen

A primary specimen can be modified on the Specimen Management page.

Background

After a primary has been created, it may need to be modified for a variety of reasons, such as correcting a data entry error or updating its current condition.

Procedure

1. Click **Specimen Management** from the LDMS menu.
2. Find the participant with the primary specimen to be modified.

   Use filters from the left side of the screen to narrow down the participants that are displayed.
3. Select the *protocol/ID2* associated with the *visit* from the **[Protocol]** box.

   The label for the **[Protocol]** box will depend on the project. Common labels are “study” and “protocol”.
4. Click the **Edit** button to the right of the primary specimen to be modified.
   The **Edit Specimen** window will open.
5. Modify the primary specimen as needed.

   If any aliquot specimens were added for this primary, it will appear at the bottom of the window.
6. Click the **Save** button.

   If there are any issues with the changes that you made, such as an invalid entry, you will be prompted to correct it. An explanation will appear next to the information that needs to be corrected.

Aliquot specimens

An aliquot is a specimen that is derived from a primary specimen

An *aliquot* is created by processing the specimen collected at a participant’s visit into smaller specimens. For example, if 10 mL of blood was collected during a visit, that 10 mL tube is the *primary specimen*. It may be processed then into smaller, 1 mL tubes of double-spun plasma. These 1 mL specimens are the aliquots in LDMS.

Adding aliquots to a primary specimen

An aliquot specimen is added to a primary specimen on the Specimen Management page.

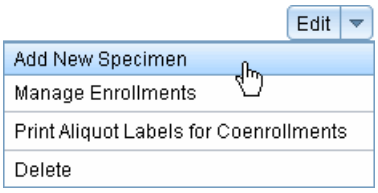
Background

An aliquot is added to an existing primary.

Procedure

1. In the menu bar, click **Specimen Management**.
2. Find the participant by using filters on the left side of the screen.
3. Click the arrow next to the **Edit** button to the right of the primary to which the aliquots will be added, and then click **Add New Specimen**.

   Figure 18: Adding a new aliquot to a primary specimen

   The **Create Specimen** window will open.
4. Enter the number of aliquots that were created into the **Number of Aliquots** box.

   When entering more than one aliquot together, all aliquots should have the same basic properties (such as the same volume). If you want to add multiple aliquots with different information, you can still do so, but you must edit the aliquots later. For example, if you have 3 aliquots that are identical, but one has a different **specimen condition**, you can add all three together, and then change the condition of the one aliquot when you are finished.
5. (If the primary is co-enrolled) Select the enrollment for the new aliquot from the **Enrollment** box.

   An aliquot cannot be enrolled in more than one study.
6. Fill in the information for the new aliquot specimens.

   Items marked with a red * are required.
7. Optional: Enter additional information about the aliquot into the **Comments** box.

   Information that is typically included here includes details for specimens that were not collected, an explanation of a condition, or an explanation of why a specimen is not available.
8. Optional: Enter additional information about the aliquot into the **Internal-only comments** box.

   Comments entered here are for your laboratory's use only. These comments will not be included if the specimen's information is shipped to another laboratory.
9. At the bottom of the window, click **Save**.

   The information you entered will be checked for completeness and validity. If there is an issue, it will be highlighted with a brief explanation of how to correct it.

Results

The number of aliquots that you specified will be added to the participant visit. The primary specimen will automatically change to `unavailable` to indicate that the specimen was consumed during processing.

What to do next

If you added multiple aliquots and any of those aliquots differed from the others (such as one aliquot having a different condition), be sure to make those changes to the aliquot.

Related sections

Entering specimen information (Overview) on page 20
Records are added to LDMS from the top-down, starting with the creation of a new participant.

Quick add on page 37
The quick add feature allow you to create all of the specimens from a participant visit at once, and is the preferred method for entering new visits in LDMS.

Entering cryopreservation information on page 37
Crypreservation information can be entered for aliquot specimens with the CEL derivative type (PBMC Cells, Viable).

Entering cryopreservation information

Crypreservation information can be entered for aliquot specimens with the CEL derivative type (PBMC Cells, Viable).

Procedure

1. On the **Specimen Management** page, location the specimen for which you are entering Cryopreservation information.
2. From the **Edit** button to the right of the specimen, click the down arrow, and then click **Cryopreservation**.

   This option will only be available for specimens with the derivative type CEL.
3. Do one of the following:
   - If results were obtained, select **Results Obtained**.
   - If results were not obtained, select the reason there are no results from the **Reason** list.
4. If results were obtained, complete the information in the **HIV Status**, **Primary Specimen Details**, **Aliquot Details**, and **Technician Details** sections
5. In the **Processing Tech Initials** box, enter the processing technicians initials.
6. In the **Data Entered By** box, enter your initials.
7. Click **Save**.

Quick add

The quick add feature allow you to create all of the specimens from a participant visit at once, and is the preferred method for entering new visits in LDMS.

If you add specimens to a participant on the **Specimen Management** page, you would need to add each primary and set of aliquots individually. The quick add feature allows you to select or create a participant and enrollment, create a new visit, and enter all of the specimens collected at that visit from one screen. For new visits, this significantly

reduces the amount of time it takes to enter a new visit in LDMS. You can even create templates for common visits to save more time.

Once a template has been used, any visits or specimens that were created are not associated with the template. This means that if the template is later changed or removed, visits that were entered using the template won't be changed.

Adding specimens using Quick Add

Quick Add is used to enter information for a participant, enrollments, and multiple specimens all on one page.

Background

This is useful when you want to enter a lot of information for a participant at once. Templates (if available) can be used to fill in predefined information for you.

Procedure

1. From the LDMS menu bar, select **Specimen Management** > **Quick Add**.
2. Optional: From the **Template** list, select a template to apply.

   Use the **Template Filters** to narrow down the list of templates. When you apply a template, a message with further instructions will appear.

   Warning: Applying a template will clear any information you already entered on the **Quick Add** screen. In addition, once the template is applied, you cannot change projects unless you apply a different template or click **Clear Template**.
3. Optional: Complete the **Participant Information**.
   a) Select the project from the **Project** box.
   b) Select the **ID1** for the participant or enter a new ID1 if you are adding a new participant.
4. Complete the **Enrollment Information** by selecting an **ID2** or by entering a new ID2.
5. Complete the **Visit Information** section.
6. Optional: Add a primary specimen.
   a) In the **Primary Information** section, click **Add New**.
   b) In the row that appeared, enter the information for the primary specimen to be created.
   c) Optional: To view and modify all of the information for the primary, click **Edit** in the right column.
7. Optional: Add an aliquot specimen.
   a) Highlight the primary specimen for the aliquot.
   b) In the **Aliquot Information** section, click **Add New**.
   c) In the row that appeared, enter the information for the aliquot specimen to be created.
8. At the bottom of the page, click **Add**.

TBD in quick add templates

The TBD code can be used in quick add templates for certain sections that might need to be completed when the template is used.

For example, you may need create a template for a visit where the additive time used for a primary specimen varies based on certain factors. In these situations, using the **TBD** code will require the user to select the correct code when the template is used.

Places where TBD can be used in quick add templates

- Primary type
- Additive type
- Derivative type
- Sub A/D type

Quick add templates

Quick add templates are predefined specimen entry scenarios (typically for specific study visits) that can be used to automatically create some default specimens.

Templates are best used for specific study visits to create the expected specimen collections for the visit. They can also be used to complete other information, such as the ID2 and project, that would be the same whenever the template is applied.

There are two types of templates: templates created by Frontier Science and templates that are created by your laboratory. Templates created by Frontier Science are designed in collaboration with leadership for projects and cannot be modified by users. Templates created by users at your laboratory can be modified. User-created templates are only available at the laboratory where they were created; they are not shipped or sharable with other laboratories.

Regardless of the type, once a template is applied, you will be prevented from changing the participant's project (meaning you can't apply a template intended for one project, and then change the project, effectively using the template for a project for which it wasn't intended). In addition, when you apply a template, any information that you already entered on the Quick Add screen will be cleared. This means that the template must be applied first, before you enter any other information.

Creating quick add templates

Create quick add templates by defining the information for the visit.

Procedure

1. From the LDMS menu bar, click **Specimen Management** > **Quick Add Templates**.
2. Complete the **Template Information** section.

   The **Name** is the name of your template as it will appear when selecting it when using the quick add feature. The **Comments** is a brief description of the template that will appear when the template is selected, and can be used to provide the person entering data if additional information or instructions, such as a reminder to remove an optional specimen if it was not collected.
3. In the Participant Information section, select a **Project**.
4. Optional: In the Enrollment Information section, select an **ID2** to be applied.

5. Optional: Add a primary specimen.
   a) In the **Primary Information** section, click **Add New**.
   b) In the row that appeared, enter the information for the primary specimen to be created.
   c) Optional: To view and modify all of the information for the primary, click **Edit** in the right column.
6. Optional: Add an aliquot specimen.
   a) Highlight the primary specimen for the aliquot.
   b) In the **Aliquot Information** section, click **Add New**.
   c) In the row that appeared, enter the information for the aliquot specimen to be created.
7. At the bottom of the page, click **Save Template**.

Modifying or deleting a quick add template
Quick add templates can be changed or deleted without affecting specimens added using the template.

Background

When a template is modified, the changes will be reflected when new visits are created using the template; existing entries will not be changed. If a template is deleted, it will be permanently removed, however any entries made using the template will remain..

Procedure

1. From the LDMS menu bar, click **Specimen Management** > **Quick Add Templates**.
2. In the **Saved Templates** box, select the template to be modified or deleted.
3. Do one of the following:
   - Make any changes to the template, and then click **Save Template** at the bottom of the page.
   - At the bottom of the page, click **Delete Template**.

Differences between primaries and aliquots

This section describes the differences between how LDMS treats primaries and aliquots.

Table 1: Primary and aliquot comparison

	Primary	Aliquot
Global Specimen ID	Ends in -00	Ends in -01, -02, etc
Processing date	Entered by user	Uses value from primary
Enrollment	Can be associated with more than one visit or protocol	Must select exactly one associated enrollment

Certain information can be cascaded from primaries to derived aliquots specimens, so that if the primary is updated users will be asked if they want to update the aliquots as well.

- Frozen date
- Frozen time
- Comments
- Internal comments
- Tech initials

If a comment is cascaded from a primary to an aliquot, it will be added to any existing comment the aliquot already has.

Related sections

Primary specimens on page 29
A primary specimen is a specimen that was collected from a participant during a visit.

Aliquot specimens on page 35
An aliquot is a specimen that is derived from a primary specimen

Specimen availability

Availability refers to whether or not a specimen exists at a laboratory.

A specimen's physical availability may change for a variety of reasons. For example, if a primary specimen was processed into aliquots, the primary specimen no longer exists and is thus not available. Likewise, if an aliquot's tube was damaged and its contents could not be recovered, it is also not available.

If a specimen is available, it can be added to a shipment and it can be assigned a storage location. If it is not available, LDMS will prevent you from shipping or storing the specimen.

Note: In LDMS for Windows, availability is called "never store".

Availability is a property of both primary specimens and aliquot specimens. By default, new specimens are available until you change them to unavailable or a specific condition automatically changes them.

There are several times where LDMS will automatically modify a specimen's availability. There are other places where you can manually change availability.

- You can manually change the availability of both primary and aliquot specimens, unless the specimen has been shipped.
- Specimens will automatically become unavailable if they are shipped.
- If a specimen's volume changes to zero, it is automatically made unavailable.
- A primary specimen will automatically become unavailable after aliquots have been derived from it, and you cannot change it back to available unless the aliquots are deleted.
- Certain condition codes, such as DSR (destroyed) will automatically change a specimen to unavailable.

Table 2: Specimen conditions that modify availability

Code	Description
QNS	Quantity Not Sufficient
SNC	Sample Not Collected
SNP	Sample Not Processed
ANP	Aliquot Not Prepared
LSH	Lost Shipment
DSR	Destroyed

Related sections

Specimen conditions on page 45

A specimen condition is a 3-letter code that indicates the status of a specimen.

Specimen record details

This section describes each specimen record entry box that appears on the Specimen Management page.

Field	Usage	Example	Notes
Additional time	A value and a unit	4 Hrs	Used to indicate information such as the amount of time a participant was fasting. Typically used for pharmacology specimens to indicate the amount of time after the last dosage was taken.
Additive type	The additive in the primary collection tube	EDT	Selected from a pre-defined list of codified values. If there was no additive in the tube, use NON. Hover the mouse pointer over an additive for a more detailed description.
Available volume			-
clinic	The clinical site where a visit occurred	102	Select from a pre-defined list. For a description of a clinic, such as its name, hover the mouse pointer over it.
Collection date	The date that a visit occurred	02/Apr/2014	This will typically be one day. If a visit occurred over multiple days, each event will considered a separate visit and listed as separately in LDMS. They will still, however, have the same visit value and visit unit.
Collection time	The time that the specimen was collected	13:30	This time should be the local time for the clinical site, and be in 24-hour format. In LDMS, collection time is known as specimen time
Comments	Additional details about the specimen		Used to provide additional information, such as an explanation of a specimen's current condition. This comment will be included if the specimen data is shipped to another laboratory.

Field	Usage	Example	Notes
Derivative type	The type of aliquot specimen created	PL2	Selected from a pre-defined list of codified values. Hover the mouse pointer over a type for a more detailed description.
Enrollment	The project-ID2 combination associated with an aliquot	Project/ID2	The enrollment is in the format [project]/[ID2].
Frozen date	The date the specimen was frozen	04/Jun/2014	This is generally used to indicate the date the freezing process began.
Frozen time	The time the specimen was frozen	15:00	This is generally used to indicate the time the freezing process began.
Global specimen ID	A unique identifier for the specimen	500-AEQ0052R-01	This will be unique for the specimen. LDMS will never generate the same global specimen ID, even at two different laboratories. Global specimen IDs for primaries always end in “-00”; global specimen IDs for aliquots will have the same ID as their parent primary, but end in “-01”, “-02”, and so forth. Specimens added in LDMS will have the originating laboratory’s ID number as the first 3 digits. Global specimen IDs generated by LDMS will lack this feature.
ID3	A sub-protocol or study	A50250562I	Used by some projects to further identify the protocol. This is typically selected from a pre-defined list. For some protocols, a temporary value such as “NOSID” may be used until the exact value is assigned to the participant. For other protocols, this field may not be used or may be optional.
Internal-only comments	Additional details about the specimen		These comments will not be included if the specimen data is shipped to another laboratory.
Is Available	Indicates if the specimen is available	✔	Availability means that the specimen exists and can be shipped, stored, and so forth. Reasons that a specimen might not exist include being destroyed or being shipped to another laboratory.
Owner Enrollment	The enrollment that “owns” a primary specimen	Project/ID2	For primary specimens that have not been processed into aliquots, this is the enrollment that “owns” the specimen
Original volume	-	-	-
Other specimen ID	A laboratory-defined identifier		There are no rules or validation for this field; it can be used to assign a special identifier if needed by your laboratory.
Primary type	The type of primary specimen	BLD	Selected from a pre-defined list of codified values. Hover the mouse pointer over a type for a more detailed description.

Field	Usage	Example	Notes
Processing date	Date a primary specimen was processed into aliquot specimens	15/Oct/2012	Use local time. If present, the value entered for the parent primary specimen will be used for aliquots derived from the primary.
Processing tech initials	The initials of the person who processed a primary specimen into aliquot specimens	JD	If the processing tech initials are set for a primary, aliquots derived from the primary will receive those initials as well. You can change the initials for individual aliquots, if needed.
Processing time	Time a primary specimen was processed into aliquot specimens	16:15	Use local 24-hour time. If present, the value entered for the parent primary specimen will be used for aliquots derived from the primary.
Reason specimen not collected	Explanation of why an expected specimen was not collected during a visit	Specimen potentially compromised	Typically used in conjunction with a specimen condition code that indicates an issue with the specimen, such as “QNS” (quantity not sufficient). If necessary, use the **Comments** box for the specimen provide more details.
Received date	The date the specimen was received by your laboratory	12/Mar/2014	-
Received time	The time the specimen was received by your laboratory	14:45	Times should be entered in 24-hour local time.
Shipped	Whether the specimen has been shipped to another laboratory	Yes or no	-
Specimen condition	The current condition of the specimen	SAT	Selected from a pre-defined list of codified values. Hover the mouse pointer over a condition for a more detailed description.
Specimen ID	A legacy specimen ID used only by LDMS	500V10000110	The specimen ID is an identifier for the specimen that was used by older laboratory management software. It will only be present for specimens that were entered or migrated from LDMS. Specimens created using LDMS will not be assigned a specimen ID.
Status	Icons indicating various properties about a specimen		Specimen is available Specimen is assigned a storage location Specimen has been shipped to another laboratory Specimen has an additional enrollment

Field	Usage	Example	Notes
Stored	Whether the specimen currently has a storage location assigned	Yes or no	-
sub-additive/ derivative			If the specimen does not have a sub-additive/derivative, select NON.
Thaw count	The number of times the specimen has been frozen and thawed.	3	-
Total cell count	Total number of cells (in millions)	10	When entered, it will be multiplied by 1 million. For example, to indicate 10 million cells, enter 10; to indicate 500,000 cells, enter 0.5.
visit value	The protocol-defined identifier for a visit	1 Wk	This comprises of two boxes, a visit number and visit type. A visit value is typically a number or letter. The visit unit is selected from a pre-defined list. Hover the mouse pointer over a visit unit for a brief description.

Related sections

Terms used in LDMS on page 16

Specimen records are stored as a hierarchy of related participant, enrollment, and information. All of this information for a participant-project combination comprise a record in LDMS.

Specimen conditions

A specimen condition is a 3-letter code that indicates the status of a specimen.

Every *primary specimen* and *aliquot specimen* in LDMS has a condition assigned to it. The detaul condition for new specimens is SAT (satisfactory), but there are many others.

The majority of conditions indicate a deviation from the expected handling for a specimen. For example, if a specimen was supposed to be collected in one type of tube but another was used, the INT (incorrect tube type) condition code could be used to indicate this.

There are several places where the condition of specimens can be changed:

- on the **Specimen Management** page, by editing an individual specimen
- when receiving specimen data from a shipping file
- on the storage page all specimens in a storage location can be modified

A common use for specimen conditions is indicating when an expected primary specimen was not collected. By setting the specimen's condition to an applicable code (such as QNS if not enough sample could be collected) and by entering descriptive comments, you can explain the omission of the expected specimens.

Related sections

LDMS abbreviated codes report on page 97

Provides a list of LDMS unit, visit, time, specimen condition codes used in LDMS and their meaning.

Destroying a specimen

Specimen destruction is noted in LDMS by applying the DSR specimen condition.

Background

When a specimen is destroyed, it is important to document that destruction in LDMS.

Procedure

1. From the menu bar, click **Specimen Management**.
2. Using filters on the left, locate the specimen to be destroyed.
3. To the right of the specimen, click **Edit**.
4. Change **Specimen Condition** to DSR.
5. (If the specimen has been assigned a storage location) Write down the storage location of the specimen, if it has not already been physically removed.

   Warning: The specimen will automatically be un-assigned from its storage location in LDMS. This is your last chance to get the specimen's storage location.
6. In the **Comments** box, enter an explanation of why the specimen was destroyed.

What to do next

If you have not already done so, use the storage location that was noted by LDMS to find the specimen and physically remove it from storage. The specimen was automatically removed from storage in LDMS.

Procedural conditions

These specimen condition codes describe issues that can occur in the collection and processing environment.

Table 3: Procedural conditions

Code	Description	Usage
ANP	Aliquot Not Prepared	Indicate that an expected aliquot was not processed, but no other more specific condition code applies. The **reason specimen not collected** box should be used in conjunction with ANP.
EQF	Equipment Failure	There was an issue with the processing equipment, such as a power failure during processing.
INV	Invalid	The specimen is not valid for testing purposes. Generally another condition code, such as LBE or PST, would be more appropriate.

Code	Description	Usage
LBE	Laboratory Error	The laboratory made a general error during processing, such as setting equipment up incorrectly or mislabeling specimens.
OPR	Outside Protocol Requirements	The specimen was drawn during the protocol-defined window, but not in a manner consistent with the protocol. For example, if a participant was supposed to be fasting but was not, this code would apply.
OSW	Outside Visit Window	The specimen was collected correctly, but outside the window for the visit as specified by the protocol.
PST	Processed After Specified Time	The specimen was collected and processed into aliquots, but the processing was done after the time frame specified by the protocol. This is commonly applicable for PBMC and pharmacology specimens.

Specimen container conditions

These condition codes describe physical problems with the specimen's container. If there is a qualitative issue with the specimen as a result of the container issue, a qualitative code may be more appropriate.

Table 4: Specimen container conditions

Code	Description	Usage
BKV	Broken Vial	The container was broken beyond recovery, such as being dropped and shattered on the ground.
DMG	Damaged	The container is not leaking, but is damaged in another way, such as a tear in a label or a dent in a plastic container.
EXP	Expired	The additive in a container, or some other component used during specimen collection, was expired.
INT	Incorrect Tube	A tube type other than the one specified by the protocol was used, and the tube used was determined to be an acceptable alternative by the study team.
LKD	Leaked	The specimen leaked from the container, and it was placed inside another container and recovered.

Temperature conditions

Temperature condition codes are typically applicable if there was an issue during shipping (such as sublimed dry ice) or if a piece of storage equipment failed. Other codes are applied as part of routine and expected handling of specimens. For example the FRO condition code can be used to indicate that a specimen intended to be stored ambient or refrigerated was frozen.

Table 5: Temperature conditions

Code	Description	Usage
DIM	Dry Ice Melted	The specimen was kept on dry ice, but the dry ice sublimed. This does not necessary imply that the specimen was damaged or TNO.
FRO	Frozen	The temperature of the specimen has been lowered below its freezing point. This applies only to specimens that were not intended to be frozen, such as

Code	Description	Usage
		specimens that were shipped at ambient temperature during the winter.
REF	Refrigerated	The specimen is cooler than room temperature but not below its freezing point. This applies only to specimens that were not intended to be refrigerated.
TNO	Temperature Not Optimal	The specimen was stored or shipped at any temperature other than the temperature specified by the protocol.
TWD	Thawed	The specimen was frozen, and has been warmed so that it is no longer frozen. LDMS has a field to track a thaw count, which can be used to keep track of how many times the specimen has been thawed. This information can be found on the Details Window for the aliquot in Specimen Management.

Shipping conditions

These condition codes apply to issues with a specimen shipment where the specimens are unaccounted for or were received late. If the shipping issue damaged the specimens, a temperature-related code such as DIM (dry ice melted) may be more appropriate.

Table 6: Shipping conditions

Code	Description	Usage
DSH	Delayed Shipment	A shipment did not occur on schedule, but there is no obvious damage to the specimens. If there was obvious damage, a more descriptive, temperature-related code (such as DIM or TNO) may be more appropriate.
LSH	Lost Shipment	A shipment was created and sent, but did not arrive at the receiving laboratory. Neither the shipping or the receiving laboratory can locate it.
SNR	Sample Not Received	A data collection form, such as a CRF, was received, but a specimen listed on the form was not received. This differs from LSH in that only some specimens were not received, compared to an entire shipment.

Qualitative conditions

These codes refer to the quality of a specimen. For example, if a blood specimen clotted, this is a qualitative issue that could prevent processing. If there was a qualitative or participant abnormality that would prevent processing but no other code is applicable, the SNP condition code can be used.

Table 7: Qualitative conditions

Code	Description	Usage
BLD	Bloody	The specimen, such as a throat swab, contained blood.
CLT	Clotted	The specimen has clotted, often because the additive did not mix correctly with the specimen.
CTM	Contaminated	The specimen is visibly contaminated.
DCG	Discharge present	A specimen, such as a vagina swab, that contains discharge material

Code	Description	Usage
HEM	Hemolyzed	A blood specimen that has hemolyzed.
HUM	Humidity	The specimen has been exposed to high humidity.
ICT	Icteric	There are excessive amounts of bilirubin in the specimen.
LIP	Lipemic	There is excessive fat content in the specimen.
LYS	Lysed	There has been a breakdown of cells in the specimen other than hemolyzation.
SNP	Sample Not Processed	A generic code for when there is a qualitative issue that prevents an otherwise correctly collected primary from being processed into aliquots, but no other code applies. The Reason sample not collected field should be used in conjunction with SNP.

Quantitative conditions

These condition codes refer to the volume of specimen collected.

Table 8: Quantitative conditions

Code	Description	Usage
DFB	Difficult bleed	There was problems trying to obtain a blood specimen from the participant, typically resulting in a lower volume than was expected. This code is more specific than SHV, which does not indicate why the volume was low.
QNS	Quantity Not Sufficient	There was not enough specimen available to create the aliquot. For example, if specimen collected from the participant was supposed to be 10 mL but only 5 mL was collected, the aliquots that could not be created due to the low volume would be considered QNS. QNS means there is no volume at all for the aliquot, even though there was some volume for the primary.
SHV	Short Volume	The primary or aliquot specimen has at least some volume, but not the full expected volume.
SNC	Sample Not Collected	The primary specimen was not collected from the participant at all. This might happen if the participant declined to provide a specific sample.

Other conditions

These condition codes are either automatically assigned to specimens or indicate some combination of issues. The default condition code that is assigned to all new specimens is SAT (satisfactory).

Table 9: Other conditions

Code	Description	Usage
ANM	Anonymized	The specimen was created using the anonymization tool in LDMS. This code is automatically assigned by LDMS and cannot be assigned manually.
COC	Combination of Codes	More than one condition code applies; the comments field in LDMS can be used to list the applicable codes.
DSR	Destroyed	The specimen has been destroyed.
OTH	Other	There is something noteworthy or unusual about the specimen, but no other available condition code applies.

Code	Description	Usage
SAT	Satisfactory	The default condition code for new specimens, indicating that the specimen was collected, processed, and handled as expected.
UNK	Unknown	Indicates that there is a significant gap in knowledge in the specimen's history. For example, if the specimen was collected by another laboratory that was not using LDMS and is several years old, and it may have been stored or treated improperly, this code may be appropriate.
YST	Did consent to storage	The participant has provided consent to storage of the specimen.
NST	Did not consent to storage	The participant did not provide consent to storage of the specimen.

Storage

Storage

The Storage page is used to define how your real-world storage is set up and where individual specimens are stored.

The Storage page is organized into four sections:

Stored specimens This is where you will actually perform storage work, such as creating a new storage unit or assigning a storage location to specimens.

Storage unit templates This is where you can define templates for commonly used storage units.

Level templates This is where you can define templates for commonly used *storage levels*.

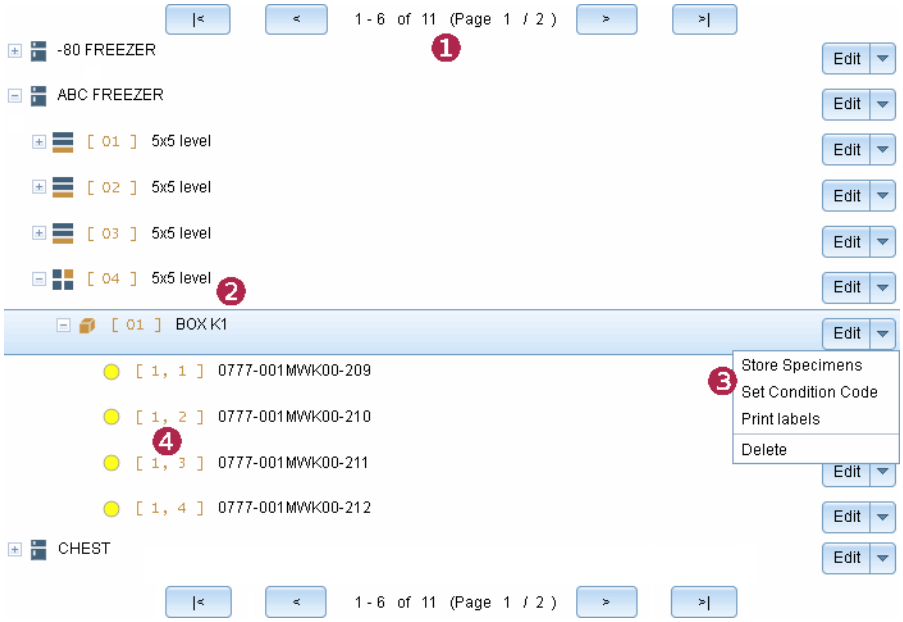
Container templates This is where you can define templates for commonly used storage containers.

Navigation on the Storage page

The **Storage** page shows a representation of your real-life storage as a collapsible tree.

This tree is called the storage tree view, and shows all of the items in storage as you have defined them in LDMS.

Figure 19: The Storage page



(1) Navigate between pages (if your storage page does not fit on one). (2) The storage tree view. (3) Edit menu for storage item named “BOX 1”. (4) The location of the specimen in “BOX 1”.

The storage units in the storage tree are sorted alphabetically by name. The contents within storage units are sorted by position.

Click on the **+** button to the left of a storage item to open it. The contents in the square brackets next to the item’s name (such as **[1, 2]**) indicates that items position in its parent storage item. To the right of each storage menu is the **Edit** menu for that item. The options available from this menu will vary, depending on the type of storage item.

The storage tree

The storage system in LDMS is a hierarchy of storage items.

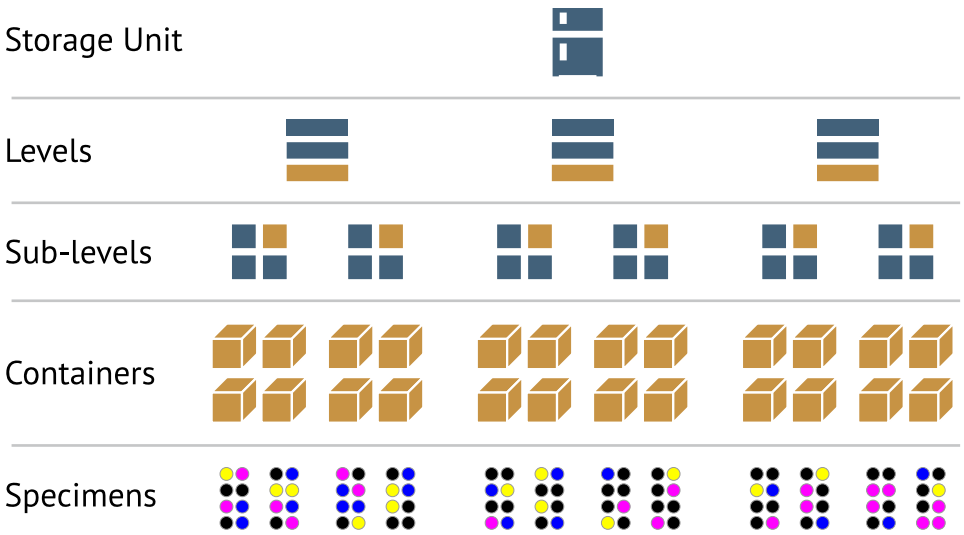
There are several types of storage items in LDMS. From biggest to smallest, these are:

storage unit This is the main cooling unit used to store specimens, such as a freezer or a refrigerator.

level This is an intermediate part of a storage system, such as a shelf within a freezer. You can add an additional level to another level. For example, you might have a shelf that contains racks of boxes, where the rack is a level on the shelf, which is a level in a freezer.

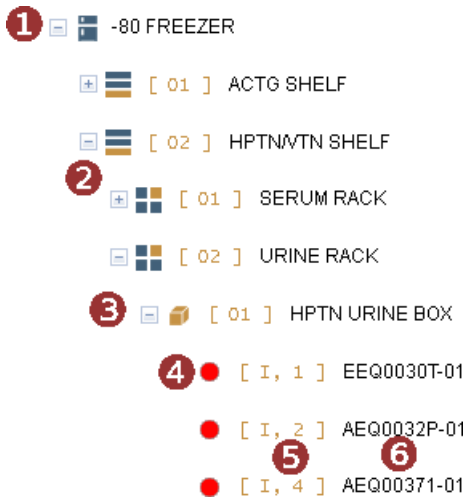
container This is the storage item that holds specimens, such as a box.

Figure 20: The LDMS storage hierarchy



The storage hierarchy is visualized on the **Storage** page in LDMS as a tree.

Figure 21: The storage tree on the Storage page



(1) A storage unit. (2) A level. (3) A container. (4) Specimens in the container. (5) The name for this specific storage unit. (6) The position of the item in its parent. (7) The global specimen ID for each specimen.

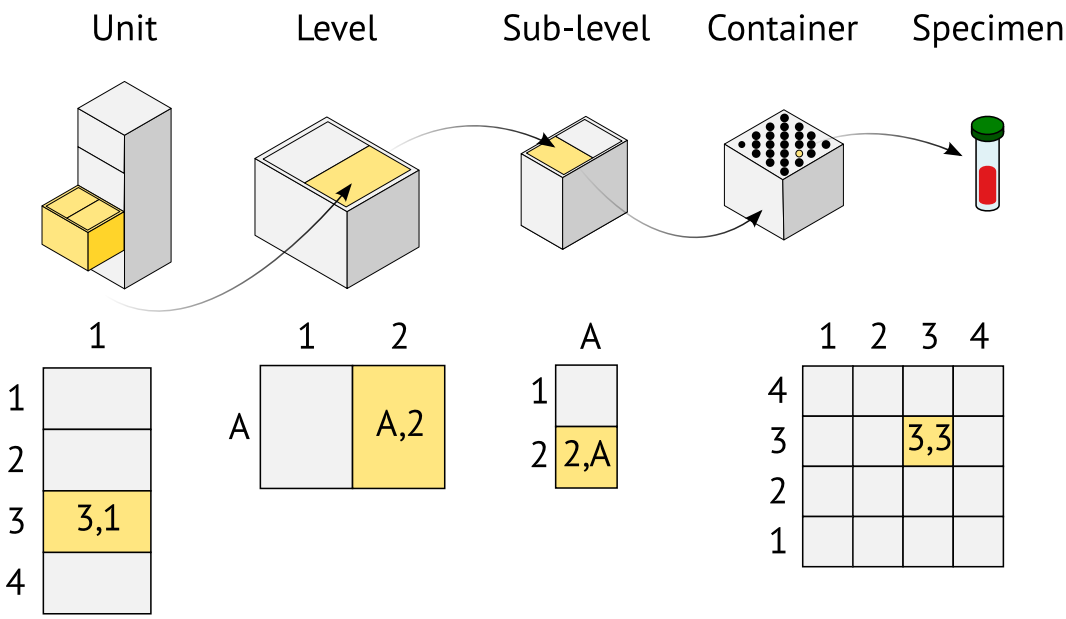
Storage items

Storage items in LDMS are represented as nested grids.

Each storage item contains rows and columns that represent individual locations within that storage item. For example, a shelf that can hold 10 boxes might have the

dimensions of 2 x 5 (2 rows with 5 columns to represent each box). This is true of all storage items, from big storage units to small containers.

Figure 22: Storage items as grids



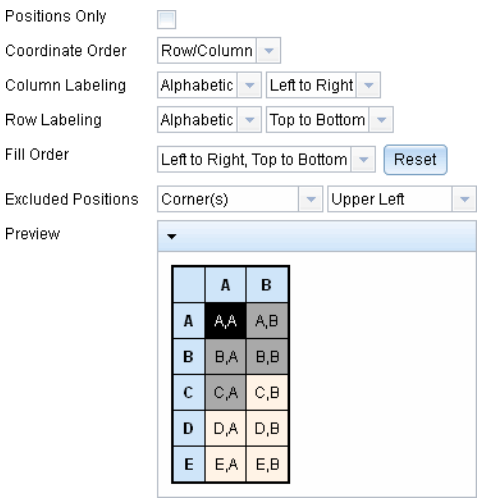
This visual illustrates the nested grid of storage items. Below each item is a grid showing where the highlighted item is positioned.

Rows and columns can be represented as either numbers or letters. Individual sections of a storage item can also be represented as a position number instead of coordinates. For example, if you have a 1 x 3 shelf, each position could be represented as 1, 2, and 3, rather than (1,1), (1,2), and (1,3).

Storage items can optionally have an *excluded position*. An excluded position is useful for determining which side of the storage item is the front and which is the back. For

example, if you know that the upper-right corner of a container will be empty, you know where to start inserting specimens.

Figure 23: Configuring a storage item layout



The preview shows how these settings will be interpreted by LDMS. A,A (black) is an excluded position. A,B to C,A (gray) contain another storage item or specimen. C,B to E,B (tan) are empty positions.

All of these properties of storage items can be configured when adding new items to the storage tree. They can also be defined in advance by using a *storage template*.

Icons and their meaning

The icons next to the items in the storage tree indicate the type of storage item, and special properties such as its additive or whether the item is part of a pending shipment..

Table 10: Storage item icons

Icon	Meaning
	Storage unit
	Level
	Sub-level
	Container
	Specimen
	Specimen that is part of a pending shipment

Table 11: Additives with colored tubes on the storage page

Any additive not listed in this table uses a black icon.

Additive	Icon
ACD	
AHP	
DPE	
DSE	
EDT	
HEP	
LHG	
LHP	
LPE	
LSE	
NON	
PED	
SCI	
SED	
SFL	
SST	
THM	

Assigning storage locations

Adding a new storage unit

A storage unit is the largest type of storage item, and is used to hold levels.

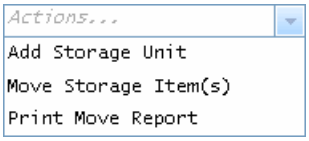
Background

A new *storage unit* is created by defining various properties for it, such as its size and temperature. You can manually define these properties for the storage unit as you create it, or you can use a template that applies default settings for you.

Procedure

1. Click **Storage** > **Stored Specimens** from the LDMS menu bar.
2. From the action menu, select **Add storage unit**.

   Figure 24: The LDMS action menu

   The **Create storage unit** window will open.
3. Optional: Select a template to use for the new storage unit from the **From template** box.
   All settings from the template will be set for you. You can override any settings from the template if needed. Any changes made will only affect the new storage unit; the template will not be modified.
4. Optional: Click the **Empty Structure** button to remove any levels that were automatically added by a template.

   This is only necessary if you do not want to use the default levels (if present) from a template.

   All levels added by a template will be removed.
5. Enter a descriptive name for the new storage unit in to **Name** box.

   This is the name for the new storage unit as it will appear in the storage tree in LDMS.
6. Select the type of storage unit from the **Type** box.
7. Select the temperature of the new storage unit from the **Temperature** box.
8. Enter the number of rows and columns for the new storage unit into the **Number of rows** and **Number of columns** boxes.

   This represents the size and capacity of the new storage unit in terms of the number of *levels* that it can hold. For example, if you are creating a freezer that can hold 5 shelves vertically, you might have 1 column and 5 rows.
9. Select or deselect the **Positions only** option as desired.

   If the positions only option is selected, each item in the level in the new storage unit will be identified by a number. If it is not selected, each level will be identified by its coordinates.
10. (If **Positions only** is not selected) Define how levels in the new unit should be identified.
    a) Select either `Row/Column` or `Column/Row` from the **Coordinate order** box.

       If `Row/Column` is selected, each level's position will be identified in the format (row,column)
    b) Select how columns and rows are to be labeled from the **Column labeling** and **Row labeling** boxes.

       To use letters to identify rows or columns, select `Alphabetic`; to use numbers, select `numeric`.
    c) Select the fill order for the new unit from the **Fill order** box.

Fill order can be used when adding a new level to the unit. While you must specify a fill order, you can override it when adding levels to the storage unit.

d) Optional: Select a position(s) in the unit to be excluded from the **Excluded positions** box.

Excluded positions are used to help identify the orientation of the container (meaning which side is the front and which is the back).

11. Review the **Preview** of the new unit.

If any empty levels will automatically be added the new unit, they will be listed in the **Default Levels** section.

12. Click the **Save** button.

Results

The new unit will have been added to the storage tree. The storage tree is in alphabetical order, so you may need to change pages in the storage tree to find your new storage unit.

Related sections

The storage tree on page 51
The storage system in LDMS is a hierarchy of storage items.

Storage templates on page 63
Templates allow you to add commonly used storage items quickly by defining them in advance.

Adding a new level in a storage unit

A new level is added to an existing storage unit or storage level.

Before you begin

You must have created the storage unit before you can add levels to storage in LDMS. In other words, you cannot create a level that is not associated with a storage unit.

Procedure

1. Click **Storage** > **Stored Specimens** from the LDMS menu bar.

2. Find the *storage unit* to which you are adding a *level*.

If you want to add a sub-level to an existing level, find that level instead. You can used the filters on the left side of the page to help find the storage item.

3. Click the down arrow next to the **Edit** button to the right of the intended parent storage unit or level, and then click **Add new level**.

Figure 25: The Edit Storage Unit button

The **Select position for new level** window will open.

4. Optional: Select a template to use for the new level from the **From template** box. All settings from the template will be set for you. You can override any settings from the template if needed. Any changes made will only affect the new level; the template will not be modified.
5. Enter a descriptive name for the new level in to **Name** box.

   This is the name for the new level as it will appear in the storage tree in LDMS.
6. Enter the number of rows and columns for the new level into the **Number of rows** and **Number of columns** boxes.

   This represents the size and capacity of the new level in terms of the number of levels or *containers* that it can hold. For example, if you are creating a shelf that can hold 5 boxes side-by-side, you might have 5 columns and 1 rows.
7. Select or deselect the **Positions only** option as desired.

   If the positions only option is selected, each item in the new level will be identified by a number. If it is not selected, each level will be identified by its coordinates.
8. (If **Positions only** is not selected) Define how levels or containers in the new level should be identified.
   a) Select either `Row/Column` or `Column/Row` from the **Coordinate order** box.

      If `Row/Column` is selected, each level or container position will be identified in the format (row,column)
   b) Select how columns and rows are to be labeled from the **Column labeling** and **Row labeling** boxes.

      To use letters to identify rows or columns, select `Alphabetic`; to use numbers, select `numeric`.
9. Select the fill order for the new level from the **Fill order** box.

   Fill order can be used when adding a new level or container to the level. While you must specify a fill order, you can override it when adding items to the level.
10. Optional: Select a position(s) in the level to be excluded from the **Excluded positions** box.

    Excluded positions are used to help identify the orientation of the container (meaning which side is the front and which is the back).
11. Review the **Preview** of the new storage item.
12. Click the **Continue** button.
    The **Select position** window will open.
13. Specify the position within the storage unit for the new level by doing one of the following:

    - Select a position for the new level from the **Position** box.
    - Click on a position in the **Preview** section.

    Positions that cannot be selected are either already occupied by another level or empty by exclusion rules for the storage unit. Gray positions are occupied; black positions are excluded.
14. Click the **Save** button.

Related sections

The storage tree on page 51
The storage system in LDMS is a hierarchy of storage items.

Storage templates on page 63
Templates allow you to add commonly used storage items quickly by defining them in advance.

Adding a container to a level

A new storage container is added to an existing level or sub-level.

Before you begin

You must have created the storage units and levels for the container before adding the container. In other words, you cannot add a container to a freezer without a level, nor can you create a container that is not within a freezer.

Procedure

1. Click **Storage** > **Stored Specimens** from the LDMS menu bar.
2. Find the storage unit to which you are adding a level.

   If you want to add a sub-level to an existing level, find that level instead.
3. Click the down arrow next to the **Edit** button to the right of the level that will hold the container, and then click **Add New Container**.

   Figure 26: The Edit level button

   If the level has had sub-levels added, the **Add new container** option will not be available. A container cannot be added side-by-side with a sub-level.

   The **Create container** window will open.
4. Enter the number of new *containers* to add in the **Number to add** box.
5. Optional: Select a template to use from the **From template** box.
   The information from the template will be populated into the remaining boxes. You can still modify this information, if needed. Any changes made will only affect the *containers* that you are creating.
6. Enter the number of rows and columns for the new container into the **Number of rows** and **Number of columns** boxes.

   This represents the size and capacity of the new container in terms of the number of specimens that the container can hold. For example, if you are creating a box that can hold 25 specimens, you might have 5 columns and 5 rows.
7. Select or deselect the **Positions only** option as desired.

   If the positions only option is selected, each specimen in the container will be identified by a number. If it is not selected, each specimen will be identified by its coordinates.

8. (If **Positions only** is not selected) Define how specimens in the new container should be identified.
   a) Select either `Row/Column` or `Column/Row` from the **Coordinate order** box.

      If `Row/Column` is selected, each specimen's position will be identified in the format (row,column)
   b) Select how columns and rows are to be labeled from the **Column labeling** and **Row labeling** boxes.

      To use letters to identify rows or columns, select `Alphabetic`; to use numbers, select `numeric`.
   c) Select the fill order for the new level from the **Fill order** box.

      Fill order will be used when adding new specimens to the container, and you chose to use automatic positioning. While you must specify a fill order, using the automatic positioning feature is optional.
   d) Optional: Select a position(s) in the container to be excluded from the **Excluded positions** box.

      Excluded positions are used to help identify the orientation of the container (meaning which side is the front and which is the back).
9. Click the **Continue** button.
   The **Select position** window will open.
10. Enter a descriptive name for the first container into the **Name** box.

    This is the label for the new container as it will appear in the storage tree.
11. Specify the position for the new container on its parent level by doing one of the following:

    - Select a position for the new container from the **Position** box.
    - Click on a position in the **Preview** section.

    Positions that cannot be selected are either already occupied by another container or empty by exclusion rules for the parent level. Gray positions are occupied; black positions are excluded.
12. Click the **Continue** button.

    You will need to specify the **Name** and position for each new container that you are creating.

Results

The new *containers* will be created in the positions specified.

Related sections

The storage tree on page 51
The storage system in LDMS is a hierarchy of storage items.

Storage templates on page 63
Templates allow you to add commonly used storage items quickly by defining them in advance.

Assigning a storage location to specimens

Individual specimens are added to containers on the **Storage** page.

Before you begin

You must create the specimens on the Specimen Management page prior to adding them to a container. You must also have created the *container* to which the specimens will be added.

Background

Individuals specimens are stored in containers. You cannot add specimens to a level or *storage unit* without a container.

Procedure

1. Click **Storage** > **Stored specimens** from the LDMS menu bar.
2. Find the storage container to which you want to add specimens in the storage tree.

   Use the filters on the left side of the screen to assist in finding the container.
3. From the **Edit** menu to the right of the container, select **Store specimens**.

   Figure 27: The Edit container menu

   The **Store Specimens** window will open.
4. Optional: Use any of the filters available to narrow down the specimens available for storage.

   While this is not required, if a filter is not applied, all specimens that can be stored at your laboratory will be displayed. In some cases, this will be a lot of specimens.
5. From the **Available specimens** list, select each specimen to store, and then click **Add** at the bottom of the list.

   Tip: To select multiple specimens in a row, hold down the Shift key; to select multiple specimens that are not together, hold down the Ctrl key.

   Specimens will be added to the container in the order that they are selected. This will be important later if you utilize the auto-fill feature.
6. Once all specimens to be stored have been selected, click **Continue** at the bottom of the window.
   The **Select position for specimen** window will open.
7. Select the position where the first specimen will be stored from either the **Position** box or the **Preview** image.

   The *global specimen ID* for the specimen will be displayed in the window. Positions that are gray are not available because a specimen already occupies that location. A position that is black is an *excluded position* in the container's configuration.
8. Optional: To place the remaining specimens to be stored automatically based on the container's fill order setting, select the **Auto-fill from selected position** option.

9. Click **Continue**.
   If there are more specimens to be stored and you did not select the **Auto-fill from selected position** option, you will be prompted to select a position for those specimens, otherwise, the window will close.

Results

The specimens are now stored. If you look at the storage tree, you will see that they are now listed under the specified container.

What to do next

Generate the Storage Details and Container reports. These will help you know where the specimens need to physically be stored.

Related sections

Generating a printable list of what is in storage on page 62
The Storage Details and Container reports can be used to print a list of all the storage items or specimens in a specific location.

Container report on page 62
The Container report is a printable, graphic representation of the specimens within a storage container.

Generating a printable list of what is in storage

The Storage Details and Container reports can be used to print a list of all the storage items or specimens in a specific location.

Background

In addition to assigned specimens to a storage location in LDMS, you will need to actually put the real-life specimens in storage. The Storage Details and Container reports can assist you in putting storage items in the correct location. It is good practice to print them after making changes to storage in LDMS.

Procedure

1. Click **Storage** > **Stored Samples** from the LDMS menu bar.
2. In the storage tree, locate the storage item for which you need to generate a report.
3. To the right of the storage item, click **Edit**.
4. Click the down arrow next to the **Reports** button, and then click either **Storage detail** or **Container**.
5. In the **File Type** box, select PDF (*.pdf) and then click **Generate Report**.

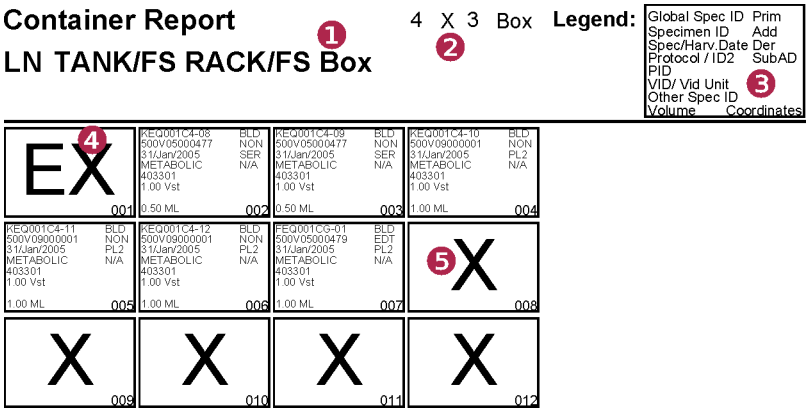
Container report

The Container report is a printable, graphic representation of the specimens within a storage container.

This report is useful for reconciling the storage locations assigned to specimens in LDMS and the actual real-life contents of a storage item. For example, if you initially

assign specimens to a storage location in LDMS, you can print the container report and use it as a guide when inserting the actual specimens in the container.

Figure 28: Container report



(1) Storage location of container, (2) Dimensions of container, (3) Legend showing how to interpret the information for a specimen, (4) An excluded position, (5) An empty location

The top-right corner of the container report contains a key that shows how to interpret the details of a specimen listed on the report.

Storage templates

Templates allow you to add commonly used storage items quickly by defining them in advance.

Template allow you to setup commonly used storage items, such as a box that your laboratory uses, and re-use the template as often as needed.

If you need to add a storage item that is a slight variation of an existing template, you can modify the template while creating the new storage item. For example, if you need to create a storage container that has an excluded corner that is not in the template, you can add it manually without needing to modify the template.

Creating storage item templates

Storage item templates can be created for storage units, levels, and containers.

Background

These templates can be selected when adding storage items to LDMS to save time.

Procedure

1. Hover the mouse pointer over **Storage** from the LDMS menu bar, and then click either **Storage unit templates**, **Level templates**, or **Container templates**, depending on the type of template you want to create.
2. Enter a name for the template into the **Name** box.

   This is the name for the template as it will appear when creating new storage items.

3. (For storage units only) Select the type of storage unit from the **Type** box and the temperature from the **Temperature** box.
4. Enter the number of rows and columns for storage items based on this template into the **Number of rows** and **Number of columns** boxes.

   This represents the size and capacity of new storage items based on this template in terms of the number of levels or containers that it can hold. For example, if you are creating a shelf that can hold 5 boxes side-by-side, you might have 5 columns and 1 rows.
5. Select or deselect the **Positions only** option as desired.

   If the positions only option is selected, each item in storage items based on this template will be identified by a number. If it is not selected, each storage item will be identified by its coordinates.
6. (If **Positions only** is not selected) Define how *levels* or *containers* in storage items based on this template should be identified.
   a) Select either `Row/Column` or `Column/Row` from the **Coordinate order** box.

      If `Row/Column` is selected, each *level* or container position will be identified in the format (row,column)
   b) Select how columns and rows are to be labeled from the **Column labeling** and **Row labeling** boxes.

      To use letters to identify rows or columns, select `Alphabetic`; to use numbers, select `numeric`.
7. Select the fill order for storage items based on this template from the **Fill order** box.

   Fill order can be used when adding a new level or container to storage items based on this template. While you must specify a fill order, you can override it when add storage items.
8. Optional: Select a position(s) in storage items based on this template to be excluded from the **Excluded positions** box.

   Excluded positions are used to help identify the orientation of the container (meaning which side is the front and which is the back).
9. Review the **Preview** for storage items based on this template.
10. Optional: (For storage units only) Add default levels for new storage units based on this template.
    a) Click the **Add level** button.
       The **Add Level** window will open.
    b) Select a template from the **Saved Templates** box.
       The information for the template will be displayed, however you will not be able to modify it.
    c) Specify how many levels to add in the **Number to add** box.
    d) Click the **Continue** button.
       The **Select Position for Level** page will open.
    e) Select a position for the first storage item you are adding from either the **Position** box or on the **Preview**.

       If you are adding more than one item, you can select the **Auto-fill all from selected position**. This option will place the remaining storage items based on the fill order of the storage item containing it. If you do not select this option, you will be prompted to manually position each storage item.

f) Click the **Continue** button.
The storage item(s) will now appear in the **Default Levels** list.

You can add sub-levels and containers to the default levels that you've added as needed.

11. Click the **Save template** button.

Modifying and removing storage templates

Storage templates can be modified or removed after they have been created.

Background

Changes to templates will only affect new storage items based on the template. Existing storage items that were based on the template will not be updated.

Procedure

1. Hover the mouse pointer over **Storage** from the LDMS menu bar, and then click either **Storage unit templates**, **Level templates**, or **Container templates**, depending on the type of template you want to modify.
2. Select the template to modify from the **Saved Templates** box.

   Note: If you want to clear the screen so that you can create a new template instead of modifying the selected template, click the **Add new** button.

   The settings for that template will be displayed.
3. Modify the template as needed.

   If you want to remove the template, click the **Delete template** button. Deleting a template makes it unavailable to be used for new storage items. Existing storage items that were based on the template will not be affected.
4. Click the **Save template** button.

Results

The template will modified and any new storage items based on it will reflect the changes. Existing storage items that were based on the template will not be modified.

Moving items in storage

Storage items can be moved to a different location or rearranged in their current location.

Background

Any storage item can be moved to another location in LDMS. Moving a storage item will require you to specify its position in its new location. If you move a storage item from its current location to its current location, you will be given the opportunity to rearrange its contents.

Procedure

1. Click **Storage** > **Stored specimens** from the LDMS menu bar.
2. Click **Move storage item(s)** from the action menu.
   The **Move storage items** window will open.
3. Select the storage items to be moved.

   The storage items selected must be moved to the same destination. You cannot move two storage items at once that cannot occupy the same location. For example, you cannot select to move a specimen and a level at the same time.
4. Click the **Next** button.
5. Locate the storage location that will be the destination.
6. Click the **Select** button to the right of the destination.
   The **Select Positions** window will open.
7. For each item being moved, select a position in the destination.

   If you want to automatically place the items being moved into the destination, select a position and then select the **Auto-fill all from selected position** option. This will cause all remaining storage items to be placed into the destination based on the destination's fill order.
8. Click the **Continue** button.

Related sections

Listing specimens that moved in storage on page 66
After moving specimens in LDMS's storage, you can print a list of these changes so that you can move the actual specimens.

Listing specimens that moved in storage

After moving specimens in LDMS's storage, you can print a list of these changes so that you can move the actual specimens.

Background

When specimens are moved in LDMS they also need to be moved in your actual specimen storage area so that the storage location assignments in LDMS remain accurate. To help you keep LDMS and your storage in sync, you can print a list of specimens that have been assigned new storage locations in LDMS.

Procedure

1. In the menu bar, click **Storage** > **Stored Samples**
2. From the action menu in the upper-left corner, click **Print Move Report**.
3. Next to **Generate for**, select one of the following:
   - Select **This Login Session** if you want to see all specimens that you have moved while signed in.
   - Select **Date Rage** if you want to see all specimens that have been moved during a given date range.
4. If using a date range, specify the **Start Date** and **End Date**
5. Leave the **File Type** as PDF `(*.pdf)`.

This report is not intended to be generated in a format other than PDF.

6. Click **Generate Move Report**.

What to do next

Each row in the *Storage Move Report* will represent one specimen that has changed locations, with its original location and its now location. Use the report to find the specimen in its original location so that it can be related to the new position.

Removing items from storage

Storage items and specimens can be removed from storage

Background

Removing a storage item removes all of the items that it contains. If the location being removed contains specimens, you will be given the opportunity to change their condition and apply comments to them, which can be accessed when viewing the specimens.

Removing a storage item that contains specimens does not delete the specimens. They will still be visible on the **Specimen Management** page, and (unless you chose to make them *unavailable*) they can be added to a different storage container.

Warning: Removing a storage item cannot be undone.

Procedure

1. Click **Storage** from the LDMS menu bar.
2. Find the storage item or specimen that you want to remove.

   Use the filters on the left side of the **Storage** page to help locate the items to be removed.
3. From the **Edit** combo button to the right of the item, select **Delete**.

   Note: For specimens, this option will be called **Remove** instead of Delete.

   The **Delete [Item]** window will open.
4. Optional: If you want to change the specimens that are stored at the location being removed to *unavailable*, select the check box.

   This means that the specimens will not be available to add to storage again. They will also not appear as available to ship when shipping specimen data to another laboratory. You will still be able to find the specimens, however, on the **Specimen Management** page.

   If you do select this option, you will also be prompted to select a condition for the specimens and enter a comment. This comment will be applied to each specimen.
5. Click the **Delete** or **Remove** button.

Modifying the condition of stored specimens

The condition of all specimens in a specific storage location can be modified at once.

Before you begin

The storage location must not contain any specimens that are part of a pending shipment.

Background

There will be occasions when you need to update the condition of all the specimens in a storage location at once. This might happen, for example, if there was an equipment failure and all of the specimens in a storage unit were thawed.

Procedure

1. Click **Storage** > **Stored Specimens** from the LDMS menu bar.
2. Locate the storage item that contains the specimens you want to modify.

   If you select a higher-level storage item, such as a *storage unit* or *storage level*, the specimens in all sub-levels and containers will be modified as well.
3. From the edit menu to the right of the storage item, click **Set condition code**.

   Figure 29: The Edit container menu

   The **Set Condition Code** window will open.
4. Contact LDMS User Support and obtain the *response code*.

   You must provide LDMS User Support with the *challenge code* displayed in the window. They will use this to generate the response code.

   Warning: Do not close the **Set Condition Code** window or a new challenge code will be generated.
5. Select the condition code to apply from the **Specimen condition** box.
6. Enter additional information about the specimens into the **Comments** box.

   Information that is typically included here includes details for specimens that were not collected, an explanation of a condition, or an explanation of why a specimen is not available.
7. Enter additional information about the specimens into the **Internal-only comments** box.

   Comments entered here are for your laboratory's use only. These comments will not be included if the specimen's information is shipped to another laboratory.
8. Click the **Save** button.

Results

The condition code, comments, and internal-only comments for all of the specimens in the storage location will be updated as you specified.

Related sections

Specimen conditions on page 45
A specimen condition is a 3-letter code that indicates the status of a specimen.

Shipping

Shipping

The **Shipping** page in LDMS is where you create shipping data files and receive shipping data files from other laboratories.

The shipping page is organized into three sections:

Pending shipments	This page is where you create new data shipments, view and modify shipments that have been created but not yet sent, and generate *shipping files*.
Receive shipments	This page is where you will import shipping data files.
Shipment history	This page shows a record of all shipping files, created and received, for your laboratory. Shipments that are still pending will not be shown.

LDMS shipping file compatibility

LDMS for the web shipping files are compatible with certain version of LDMS for Windows.

The format of the shipping files used by LDMS for the web is an encrypted XML data file. LDMS for Windows support will vary based on the version of LDMS for Windows.

LDMS for Windows version 10.0 or higher	Can ship and receive shipping files with laboratories using LDMS for the web without restriction
LDMS for Windows version 9.x	Can ship specimens to but not receive specimens from LDMS for the web
LDMS for Windows version 8.x or earlier	No shipping compatibility with LDMS for the web

Related sections

Specimen identifiers in LDMS for Windows on page 30
LDMS for Windows handles specimen identifiers in a few ways that differ from LDMS.

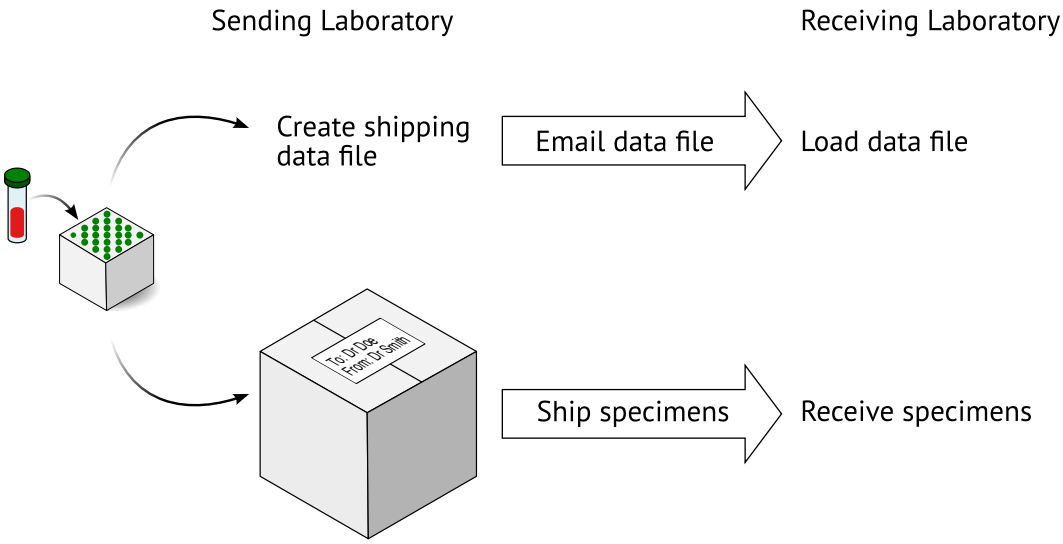
Shipments are data transfer

Shipping in LDMS is the process of transferring specimen information from one laboratory to another.

This is a parallel process to physically packaging and shipping specimens to another laboratory. As specimens are packaged, you will specify in LDMS that they are to be shipped. You will then generate a data file with the information for those specimens called a *shipping file*. Once created, you provide that file to the laboratory that will receive the specimens. In this sense, it is more accurate to think of “shipping” in LDMS as “data transfer” between two laboratories.

LDMS does not assist with the physical shipment of specimens. LDMS does not create postal labels for shipping boxes, track the progress of shipments of couriers, and other logistical tasks. Laboratories need to implement their own solutions for the actual shipping process.

Figure 30: Shipping vs data transfer



This figure illustrates how creating a shipping data file in LDMS and transferring it to a laboratory is a separate process from physically boxing and shipping the specimens to the recipient.

There are two ways to ship specimens using LDMS:

1. You can select individual specimens to be shipped, and then tell LDMS how you are going to put them in a shipping container.
2. You can assign the specimens to a container on the **Storage** page, then ship the container.

Both of these methods can be used together within the same shipment. Sending a container from LDMS storage is generally preferred over creating ad hoc shipping containers. By using a container that has already been organized and checked, you will save time and reduce the possibility of sending the wrong specimens.

Shipment numbers

Shipment numbers are assigned to sent and received shipments to identify it at your laboratory.

When a new shipment is created or received, it is assigned the next available shipment number by LDMS. For example, if the last shipment that you received had the shipment number 152, the next shipment (whether you receive it from another laboratory or create it to send) will be assigned the shipment number of 153.

Shipment numbers are not unique between laboratories, nor will they be the same at the laboratory that sent and shipment and the laboratory that received it. For example, if you create a shipping file, it may be assigned the number 153 at your laboratory. When the receiving laboratory receives the shipping data file, it will be assigned the next available shipment number at their laboratory, which will probably be different from the shipment number at your laboratory.

For this reason, shipment numbers cannot be directly matched to shipments between laboratories. Instead, you would need to use the shipment setup date and other information to match a shipment that you sent to the same shipment received at another laboratory.

New shipments

New shipments are created on the **Pending Shipments** page

The **Pending Shipments** page shows all data shipments that have been created but not yet sent. This page serves the following purposes:

1. Create new shipments
2. View or modify shipments that have been created but not yet sent.
3. “Ship” a shipment.

Figure 31: The Pending Shipments page

Batch Number	Shippment Format	Destination Lab	Shipment Temperature	Setup Date	Ship Date	QA/QC	
119	LDMS	300	Dry Ice	08/Sep/2015	08/Sep/2015	Not Performed	Edit/Ship
118	LDMS	1	Dry Ice	02/Sep/2015	02/Sep/2015	Not Performed	Edit/Ship
117	LDMS	350	Ambient	02/Sep/2015	02/Sep/2015	Not Performed	Edit/Ship
116	LDMS	350	Ambient	02/Sep/2015	02/Sep/2015	Not Performed	Edit/Ship
115	LDMS	350	Cold Packs	02/Sep/2015	02/Sep/2015	Not Performed	Edit/Ship
113		499		13/Aug/2012		Not Performed	Edit/Ship
108		999001		01/Sep/2011		Not Performed	Edit/Ship
102		17	Dry Ice	11/Jul/2011		Complete With Errors	Edit/Ship
66		999001	Cold Packs	05/Apr/2010		Not Performed	Edit/Ship
55		300	Cold Packs	25/Mar/2010		Not Performed	Edit/Ship

The term “ship” in LDMS means that all of the specimens you want added to a shipment have been added and it is ready to be sent. When you ship a shipment, you will be prompted to save a shipping data file—this file is the shipment. In addition to sending a physical package of specimens to the receiving laboratory, you will need to provide the

laboratory with the shipping data file. This is most commonly done using email, but you could also put the file on a disc or re-writable USB drive and include it with the physical shipment.

Related sections

Batch storage report on page 80
This report lists the specimens in a shipment and their assigned storage location.

Shipment numbers on page 71
Shipment numbers are assigned to sent and received shipments to identify it at your laboratory.

Icons and their meaning on page 54
The icons next to the items in the storage tree indicate the type of storage item, and special properties such as its additive or whether the item is part of a pending shipment..

Creating new shipments

Creating a shipment means defining which specimens will be sent and where they are going to be sent.

Before you begin

- The specimens must have already been entered into LDMS
- If you want to ship a storage container with specimens, you must have already assigned the specimens to the container in LDMS.

Background

Note: You can save an incomplete shipment (such as leaving the destination blank), however you will need to complete the shipment before it can be sent.

Procedure

1. Click **Shipping** > **Pending Shipments** from the LDMS menu bar.
   The Pending Shipments page will open.
2. From the LDMS action menu, click **Create Shipment**.
   The **Pending Shipment Preview** window will open.
3. Complete the information on the **General** tab.

   All information on this tab is required.

shipment date	This is the date that the physical shipment was (if it was already shipped) or will be shipped. If you don't know when you will be shipping the specimens, select an approximate date—it can be changed before the shipping file is generated.
format	This is the type of shipping file you are creating. Unless the destination does not use LDMS, select **LDMS**.

temperature	This will be the method of temperature control for the specimens during transport.

4. Complete the information on the **Shipping Destination** tab.

   Existing laboratories that are using LDMS and LDMS are already available for selection. The contact information for these laboratories is maintained by Frontier Science.

   a) Select either **Contact**, **Lab Number**, or **Lab Name**.

      This is how you will select the laboratory. **Contact** is the shipping contact person on file for the laboratory. **Lab Number** is the laboratory's LDMS ID. **Lab Name** will show each laboratory in alphabetical order.

   b) Select a laboratory from the drop-down box below.

      If you selected **Contact** or **Lab Name**, the number in parenthesis next to each laboratory's name is the laboratory's LDMS ID number.

   c) Select or enter the person to receive the shipment at the receiving laboratory from the **Contact Person** box.

   Laboratories can be added to LDMS. These will only appear as available for selection by your laboratory. Since all laboratories that use LDMS and LDMS are already listed, the new laboratory is assumed to be using some other laboratory management system.

   a) Select **New lab**.

   b) Complete all the boxes in the **Shipping Destination** and **Contact Information** sections.

   c) Optional: If you want to save this laboratory for future use, select the **Save address** box.

5. Complete the information on the **Contact at sending lab** tab.

   This is where you enter the information for the person at your laboratory who should be contacted if there is an issue with the shipment.

6. Optional: Complete the information on the **Shipment notes** tab.

   This information will appear on the shipping manifest and will be shown to the receiving laboratory when they load the shipping file. These comments are in addition to comments that were entered for individual specimens. Use the **Comment** box for general information about the shipment. The **Disclaimer** box can be used to provide information about the restrictions placed on the specimens' usage.

7. Add specimens to the shipment on the **Shipment Contents** tab.

   - Add a container already setup on the **Storage** page to the shipment from the **Storage Containers** list.
   - Add specimens to a single use shipping container in the **Shipping Boxes** section.

8. Add storage containers to the shipment.

   a) Click the **Add New** button to the right of the **Storage Containers** list.
      The **Storage Containers** window will open.

   b) Locate the storage item to be shipped.

   c) Click the **Select** button next to the storage item.
      The **Storage Containers** window will close. The storage item will appear in the **Storage Containers** list.

9. Add individual specimens to the shipment.
   a) Click the **Add New** button to the right of **Shipping Boxes**.
      The **Create Shipping Container** window will open.
   b) Enter the number of rows and columns for the container into the **Number of rows** and **Number of columns** boxes.

      This represents the size and capacity of the container. For example, a container with 8 columns and 5 rows could hold up to 40 specimens. The container as it is currently defined will appear in the **Preview** section.
   c) Select or deselect the **Positions only** option as desired.

      If the positions only option is selected, each specimen in the shipping container will be identified by a number. If it is not selected, each specimen will be identified by its coordinates.
   d) (If **Positions only** is not selected) Define how specimens in the container should be organized.

coordinate order	This is how the specimens position will be identified, such as (8,5) or (5,8).
column labeling and row labeling	This is how rows and columns will be named in the container. Alphabetic uses letters while numeric uses numbers. The second option specifies where labeling should start.

   e) Select the fill order for the shipping container from the **Fill order** box.

      The fill order is the logic that is used to determine where specimens will be placed in the container.
   f) Select the sort order for the container from the **Primary Sort Order** box.

      This is how specimens will be sorted before they are put into the container.
   g) (If **Prot/ID2** was selected for primary sort order) Select a **Secondary Sort Order**.
   h) Click the **Add Specimens** button.
      The **Store Specimens** window will open.
   i) From the **Available specimens** list, select each specimen to store, and then click **Add** at the bottom of the list.

      Use the available filters to narrow down the number of specimens displayed. Specimens that are not available will cannot be selected.

      The selected specimens will appear in the **Selected Specimens** list. They can be removed from the shipment by clicking the **Remove** button next to them.
   j) Click the **Continue** button.
      The **Store Specimens** window will close. The **Preview** section for the shipping contain will indicate the positions that now hold specimens. If you added more specimens than could fit in the contain, multiple containers will have been created. You can switch between these containers using the arrow buttons in the **Preview** section.
   k) Click the **Add** button.
      The shipping contain will appear in the **Shipping boxes** list.
10. Do one of the following:

    - To save the shipment so that it can be modified again before the shipping file is generated, click the **Save** button.

- To generate the shipping file now and change the shipment's status to shipped, click the **Ship** button.

Results

If the shipment was saved, a new shipment will be added to the **Pending Shipments** page. It will appear at the top of the list and will have been assigned the next available shipment number.

What to do next

You should perform QA/QC on the shipment after it has been created before sending it.

Related sections

Supported shipping file formats on page 77
These are the file formats that are supported for sending and receiving shipping files.

Shipment QA/QC on page 83
Shipment QA/QC is the process of comparing actual specimens in a shipping container to the specimen that is expected in that container position by LDMS. This should be done for shipments before they are sent and after they are received.

Sending a pending shipment

Sending a shipment is the process of generating a shipping data file on the **Pending Shipments** page.

Background

The shipping file can either be in LDMS format or CSV format. The file that is created will need to be transferred to the laboratory to add the specimens to their database.

Procedure

1. Click **Storage** > **Pending Shipments** from the LDMS menu bar.
2. Locate the pending shipment to be sent.
3. Click the **Edit/Ship** button to the right of the shipment.
   The **Pending Shipment Preview** window will open.
4. Click the **Ship** button.

   LDMS will warn you that this is your last change to generate the Batch Storage Report. If you want to view this report, click the **Cancel** button. On the **Shipment Contents** tab, click the **Batch Storage Report** button to generate the report.

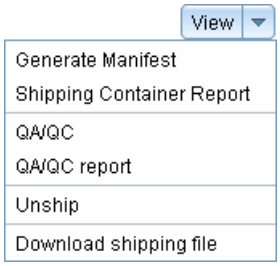
   LDMS will check that the information for the shipment has been fully completed. If there are any issues, it will be highlighted in red and you will be prompted to correct it before continuing.
5. When asked to confirm if you want to send the shipment, click the **OK** button.

   The shipping file will be generated. When it is ready, you will be prompted to save it to your computer.

Warning: Do not close the window until the shipping file has been saved.

6. Click the **Close** button to go back to the **Pending Shipments** page.
7. Optional: Generate a shipping manifest.
   a) Click **Shipping** > **Shipment History** from the LDMS menu bar.
   b) Locate the shipment that you sent.
   c) Click the arrow next to the **View** button, and then click **Generate Manifest**.

   Figure 32: Generate Manifest



Results

The shipping file is now saved at the location you specified on your computer.

What to do next

This is the file you will need to transfer to the laboratory that will be receiving the specimens. You can either email this file to the receiving laboratory or provide it on removable media (such as a USB drive) with the physical shipment of specimens.

Related sections

Un-sending shipments on page 86
After a shipping file has been generated and a shipment changed to sent in LDMS, it is possible to change the shipment back to a pending state.

Generating a shipping manifest

Shipping manifests contain an overview of the contents of a shipment, and are intended to be printed and included with shipments.

Background

A shipping manifest should be printed and included with all shipments. This will help the laboratory receiving the shipment to identify its contents and match it to the shipping file that you provided to them. You can also save the manifest as a PDF file, and then send it to the receiving laboratory long with the shipping file.

The shipping manifest can be generated before or after a shipment is sent.

Figure 33: A typical shipping manifest

Shipping Manifest
QA/QC Not Performed

Batch Number: 119 1

Setup Date: 08/Sep/2015 2 **Shipped:** No **Ship Date:** 08/Sep/2015

Shipped From:		Shipped To:	
Lab ID:	500	**Lab ID:**	300
Lab Name:	Frontier Laboratories 4033 Maple Road Amherst NY 14226	**Lab Name:**	University Pathology Bldg., Room: 31 600 University St. Baltimore MD 21287 4
Country:	3	**Country:**	United States
Contact:		**Contact:**	
Phone #:		**Phone #:**	(410) 114-6767
Fax #:		**Fax #:**	(410) 114-0430
E-mail:		**E-mail:**	lab300@fstrf.org

Number of Specimens 4
Comments:

Shipping Manifest **Box Name: QA** 5
Batch Number: 119 **Setup Date:** 08/Sep/2015 **Shipped:** No **Ship Date:** 08/Sep/2015

Spec ID	Global Spec ID	Project/Prot	PID/ID1	VID	Clinic	Spec Date or Harvest Date	Spec Time	Prim	Add	Der	Sub A/D	Volume	Pos
500V05001596	BEQ003ZN-05	VQA 009RSMA	009RSM.01A	8 Wk	8000	01/Mar/2005	12:34	BLD	EDT	CEL	N/A	1 ML	H, E
500V05001596	BEQ003ZN-03	VQA 009RSMA	009RSM.01A	8 Wk 6	8000	01/Mar/2005	12:34	BLD	EDT	CEL	N/A	1 ML	H, F
500V05001596	BEQ003ZN-01	VQA 009RSMA	009RSM.01A	8 Wk	8000	01/Mar/2005	12:34	BLD	EDT	CEL	N/A	1 ML	H, G
500V05001591	HEQ003X5-01	VQA 007RSMB	007RSM.05B			19/Apr/2005		BLD	EDT	CEL	N/A	1 ML	H, H

(1) The shipment number, (2) The date that the shipment was initially created, (3) Sending laboratory's contact information, (4) Receiving laboratory's contact information, (5) Name of shipping container, (6) Specimens in the shipping container

Procedure

1. Do one of the following:
   - For pending shipments, click **Shipping** > **Pending Shipments** from the menu bar.
   - For sent shipments, click **Shipping** > **Shipment History** from the menu bar.
2. Locate the shipment for which you want to generate a manifest.
3. Click the arrow next to the **View** button to the right of the shipment, and then click **Generate Manifest**.
4. Select PDF from the **File type** box.

   Because manifests are intended to be printed, they have been designed with PDF output in mind only. If you select a different file format for the manifest, you may experience formatting issues.

Results

You will be prompted to save the manifest or it may open automatically, depending on the default behavior of your web browser.

Supported shipping file formats

These are the file formats that are supported for sending and receiving shipping files.

Table 12: Supported shipping file formats

Format	Encrypted?	Intended destination
LDMS	Yes	Laboratories using LDMS or LDMS for Windows
CSV	No	Laboratories not using LDMS
SeraCare	No	Specimens being sent to the SeraCare repository
Cross-LIMS Manifest	No	Laboratories not using LDMS

CSV shipping files

LDMS can generate and accept shipping files that are a standard CSV (comma separated value) format.

A CSV shipping file can be generated by many applications other than LDMS. You can make the CSV file using Excel, LibreOffice Calc, a text editor, or any other program that can generated comma-separated data. For LDMS to be able to read the CSV file, it must meet the following requirements:

- header row is present, and column headers are named correctly
- required columns are present (but can be in any order)
- fields are separated by commas
- dates are in the format dd/MMM/yyyy
- times are in 24-hour format

Column	Usage	Notes
Shipment Number	Required	ID number for the shipment
Sending Lab	Required	ID number for the laboratory sending the shipping file
Receiving Lab	Required	ID number for the laboratory receiving the shipping file
Setup Date	Optional	Date shipping file was created
Ship Date	Optional	Date specimens were shipped
Temperature	Optional	Temperature of the shipment
Shipment Comment	Optional	Notes about the shipment
Container	Optional	Name of container holding specimen
Row	Optional	Position of specimen in container
Column	Optional	Position of specimen in container
QA Performed	Optional	Whether shipping file was compared to the actual shipment to ensure specimens were correct and included in the correct container locations
Project	Required	Name of project for which the specimen was collected

Column	Usage	Notes
ID1	Required	Participant or specimen source ID
ID2	Required	Protocol ID
ID3	Required	Sub-protocol ID
Visit	Required	Value for visit
Visit Unit	Required	Unit for visit (e.g. WK)
Clinic	Required	Clinical site where specimen was collected
Specimen Date	Required	Date specimen was collected
Specimen Time	Required	Time specimen was collected
Received Date	Required	Date specimen was received by laboratory
Received Time	Optional	24-hour time specimen was received by laboratory
Specimen ID	Optional	Specimen ID (used for specimen entered in LDMS for Windows only)
Global Spec ID	Optional	Will be generated automatically during import if blank
Other Spec ID	Optional	Other specimen ID
Primary	Required	Three letter primary specimen code
Additive	Required	Three letter specimen additive code
Derivative	Required	Three letter derivative specimen code
Sub A/D	Optional	Three letter sub-additive/ derivative specimen code (default is N/A)
Volume	Required	Volume of specimen
Volume Units	Required	Units used for specimen volumn
Condition	Optional	Three letter code representing specimen's current condition (default is SAT)
Comments	Optional	Notes about the specimen
Tests	Optional	Assays assigned to the specimen

Shipping container report

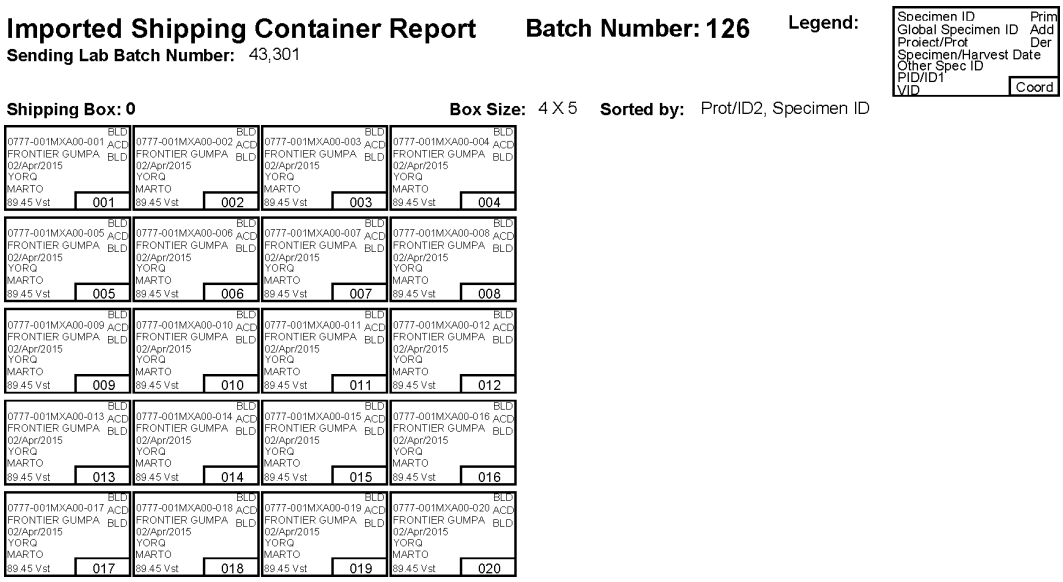
This report shows a visual map of each container's contents, along with the details for each specimen being shipped.

The shipping container report can be generate while you are creating a shipment or after a shipment has been sent.

The shipping container report can be found on either the **Pending Shipments** or **Shipment History** page. To the right of the shipment, click the down arrow next to the button and click **Shipping Container Report**.

There is a key in the top-right corner of the report that shows what information is within each box. Each box on the report corresponds to one location in the container. Locations that are marked with a large X indicate locations in the container that are empty.

Figure 34: The Shipping Container Report



Batch storage report

This report lists the specimens in a shipment and their assigned storage location.

This report is intended to be printed and be used to help locate and pull specimens from storage. This would only be applicable if you assigned a storage location to the specimens being shipped on the **Storage** page.

The shipping container report can be found on either the **Pending Shipments** or **Shipment History** page. To the right of the shipment, click the down arrow next to the button and click **Shipping Container Report**.

If you are sending the shipment. the Batch Storage Report must be created before you generate a shipping file. One the shipping file has been created, the report will no longer be available. This is because specimens are removed from their assigned storage location and their availability changed to unavailable during shipping file creation. Once this happens, LDMS will not know where the specimens were located.

Information displayed on report

- Shipment number

- Shipment setup date
- Specimen ID
- Global specimen ID
- Other specimen ID
- Project/ID2
- ID1
- Visit
- Draw date
- Draw time
- Primary
- Additive
- Derivative
- Sub additive/derivative
- Volume
- Storage location

Related sections

Creating new shipments on page 72
Creating a shipment means defining which specimens will be sent and where they are going to be sent.

Receiving shipments

Receiving a shipment is the process of importing a shipping file received from another laboratory to add the specimen's information into your laboratory's database.

Background

Once you have the shipping file from the laboratory sending you the specimens, you can import the specimen information into LDMS.

Procedure

1. From the menu bar, click **Shipping** > **Receive Shipments**.
2. Click **Select File**.
   A window will open to select the shipping file. The shipping file will generally be named `ship-[your laboratory ID number].xml` for LDMS shipping files or `lab[your laboratory ID number].csv` for CSV files.
3. Optional: If you want specimens to automatically be assigned storage locations, select **Import directly into storage**.
4. Click **Preview Shipment**.
5. Review the shipment to ensure it is correct.
   It is a good idea to check that the shipping destination is your laboratory, and that the specimens are what you were expecting. Click the **View** button next to

shipment containers to see what specimens are in the shipment. By checking the shipment at this stage, you can avoid potential errors, such as receiving the wrong shipping file.

6. Click **Receive Shipment**.

Results

LDMS will assign the next available shipment number to the shipment.

What to do next

Go to the **Shipment History** page to view the newly received shipment and perform additional actions, such as QA/QC.

Related sections

Shipment QA/QC on page 83
Shipment QA/QC is the process of comparing actual specimens in a shipping container to the specimen that is expected in that container position by LDMS. This should be done for shipments before they are sent and after they are received.

Related sections

Import as is on page 82
When receiving a shipping file, it is possible to take shipping and storage items in the shipment and automatically asign them to your laboratory's storage. The option to do this is provided when receiving a shipping file.

Shipping and projects

In order to receive a shipment, a laboratory must already have the projects in the shipment defined.

For example, if a laboratory sends you a shipping file that contains specimens in the FRONTIER project, you must create the FRONTIER project at your laboratory before you can receive the shipping file. If you do not create the project first, you will receive an error message when attempting to receive the shipping file.

For this reason, it is good practice to communicate with a laboratory before you send a shipping file to ensure that they have created the necessary projects in advance.

Import as is

When receiving a shipping file, it is possible to take shipping and storage items in the shipment and automatically asign them to your laboratory's storage. The option to do this is provided when receiving a shipping file.

The items on the shipment will be placed in your storage based on what it is.

Item	Where it will go in storage
Storage unit	Added as a new storage unit
Level or container	In the **SHIPPING IMPORT FREEZER**, on a level with the shipment number

If the item was a storage item at the sending laboratory, it will retain its original name in your storage. If the item was a storage contain created for the shipment, it will be

placed in the **SHIPPING IMPORT FREEZER** on a level with the shipment number. These containers will generally have names like “Auto-generated box #76-1” in your storage.

Once the items are added to your storage, you are not restricted to how you use them. You can retain containers, move them to different storage units, and so forth.

Related sections

Receiving shipments on page 81
Receiving a shipment is the process of importing a shipping file received from another laboratory to add the specimen’s information into your laboratory’s database.

Handling non-LDMS shipping files

Shipping files that did not originate from LDMS may not contain the global specimen ID needed by LDMS. Such specimens will receive special handling when they are received.

- All specimens without a global specimen ID will be treated like aliquot specimens and assigned to a new primary specimen.
- All specimens without a global specimen ID will be assigned one
- Specimens with the same project, ID1, ID2, visit, draw date, draw time, primary type, and additive time will be grouped until the same primary specimen.

Shipment QA/QC

Shipment QA/QC is the process of comparing actual specimens in a shipping container to the specimen that is expected in that container position by LDMS. This should be done for shipments before they are sent and after they are received.

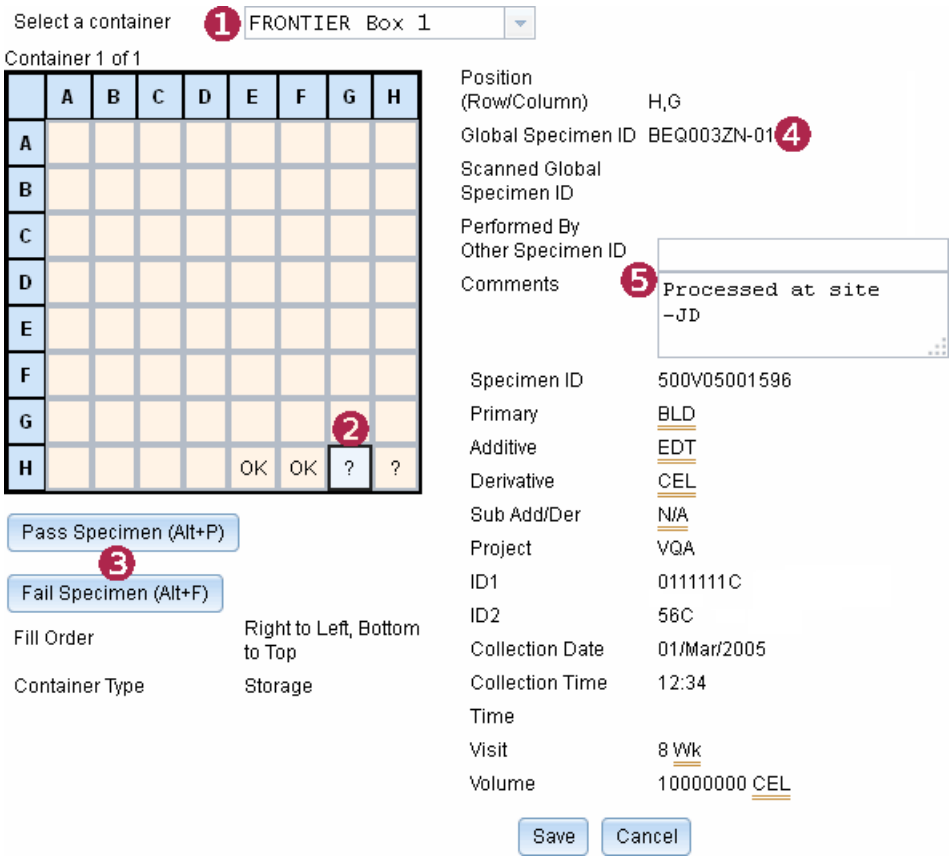
You can view the current QA/QC status of a shipment on the **Pending Shipments** or **Shipment History** page.

QA/QC Status	Action Needed
Complete	None
In Progress	Finish QA/QC
Complete with Errors	Investigate the specimens that did not pass QA/QC
Not Performed	Start QA/QC

To perform QA/QC, you need to look at the global specimen ID on a physical specimen, and then compare it to the global specimen ID in LDMS. If they match, the specimen has passed, otherwise it has failed. QA/QC should be performed by scanning the specimen’s barcode, which will read the global specimen ID and do the comparison for

you. This is the recommended process. If you do not have a barcode scanner, you can manually compare the two global specimen IDs instead.

Figure 35: The QA/QC Entry page



(1) Containers in the shipment, (2) Currently selected specimen, (3) Manually pass or fail selected specimen, (4) Currently selected specimen's global specimen ID, (5) Modifiable boxes

If the shipment contains multiple containers, you will need to change containers during QA/QC, since each container must be reviewed separately.

While performing QA/QC, you have the option to modify each specimen's other specimen ID and comments. If you do so, these changes will be reflected in the specimen information on the **Specimen Management** page.

Performing QA/QC

QA/QC is performed by selecting the **QA/QC** option for the shipment on either the **Pending Shipments** or **Shipment History** page.

Background

QA/QC should be performed after creating a pending shipment but before creating the shipping file. It should also be performed on shipments from other laboratories after they have been received.

Procedure

1. Do one of the following:
   - To QA/QC a pending shipment, click **Shipping** > **Pending Shipments**
   - To QA/QC a received shipment, click **Shipping** > **Shipment History**
2. On the button to the right of the shipment, click the triangle and select **QA/QC**.
3. With the first specimen select (which is the default), do one of the following:
   - Scan the specimen's barcode (recommended)
   - Manually compare the **Global Specimen ID** on the screen with the global specimen ID on the specimen's label. If they match, click **Pass Specimen**, otherwise click **Fail Specimen**.
4. (If there are multiple shipment containers) After each specimen in the container has been reviewed, select the next item from the **Select a Container** list.
5. After all specimens in the shipment have been reviewed, click **Save** at the bottom of the page.

What to do next

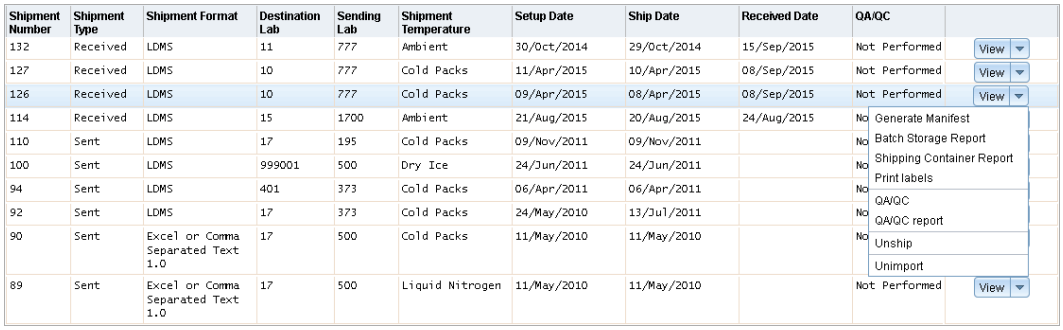
Confirm that QA/QC has been completed for the shipment by looking at the **QA/QC** column on the **Pending Shipments** or **Received Shipments** page.

Shipment history

A record of shipments sent and received can be found on the **Shipment History** page.

In terms of LDMS, a shipment received is one for which you have uploaded a shipping data file from another laboratory in LDMS, and a shipment sent is when you have generated the shipping data file.

Figure 36: The Shipment History page



Shipment Number	Shipment Type	Shipment Format	Destination Lab	Sending Lab	Shipment Temperature	Setup Date	Ship Date	Received Date	QA/QC	
132	Received	LDMS	11	777	Ambient	30/Oct/2014	29/Oct/2014	15/Sep/2015	Not Performed	View
127	Received	LDMS	10	777	Cold Packs	11/Apr/2015	10/Apr/2015	08/Sep/2015	Not Performed	View
126	Received	LDMS	10	777	Cold Packs	09/Apr/2015	08/Apr/2015	08/Sep/2015	Not Performed	View
114	Received	LDMS	15	1700	Ambient	21/Aug/2015	20/Aug/2015	24/Aug/2015	No	
110	Sent	LDMS	17	195	Cold Packs	09/Nov/2011	09/Nov/2011		No	
100	Sent	LDMS	999001	500	Dry Ice	24/Jun/2011	24/Jun/2011		No	
94	Sent	LDMS	401	373	Cold Packs	06/Apr/2011	06/Apr/2011		No	
92	Sent	LDMS	17	373	Cold Packs	24/May/2010	13/Jul/2011		No	
90	Sent	Excel or Comma Separated Text 1.0	17	500	Cold Packs	11/May/2010	11/May/2010		No	
89	Sent	Excel or Comma Separated Text 1.0	17	500	Liquid Nitrogen	11/May/2010	11/May/2010		Not Performed	View

Shipment number	An internal shipment number assigned to the shipment at your laboratory
Shipment type	Indicates whether the shipment was **sent** to another laboratory or **received** from another laboratory
Shipment format	The type of shipping file

Destination laboratory	The laboratory ID of the destination that is indicated within the shipping file
Sending laboratory	The laboratory that generated the shipping file.
Shipment temperature	The shipment temperature that was indicated in the shipping file
Setup date	The date the shipping file was created
Ship date	The date that the shipping file was generated
Received date	The date that your laboratory loaded the shipping file in LDMS (only applicable to shipments that you received)
QA/QC	This indicates whether or not QA/QC was performed on the shipping file

Removing a received shipment

Background

If a shipping file was received and loaded into LDMS in error, it may need to be removed. Because multiple laboratories may be affected and the quality of specimen data affected, the ability to unload a shipping file that was received requires you to contact LDMS User Support.

Procedure

1. Contact LDMS User Support.
   This should be done first because if your session is idle for too long and you are logged out, a new challenge code will be generated.
2. In the menu bar, click **Shipping** > **Shipment History**.
3. On the **View** button to the right of the shipment, click the arrow and select **Unimport**.
4. Provide LDMS User Support with the **Challenge Code**.
5. In the **Response Code** box, enter the code provided LDMS User Support.
6. Click **Unimport**.

Related sections

Challenge codes on page 15
A challenge code is password that you must give to LDMS User Support to perform certain actions in LDMS.

Un-sending shipments

After a shipping file has been generated and a shipment changed to sent in LDMS, it is possible to change the shipment back to a pending state.

Background

This would be necessary if you need to modify the shipment and re-generate the shipping file. This could happen, for example, if you discovered there were more specimens to be shipped and the shipment hasn't left your laboratory yet.

CAUTION: A shipment should not be un-sent if the receiving laboratory has received and loaded the shipping file. Doing so would cause the specimens to appear at both laboratories. Contact the receiving laboratory and ensure that have not yet loaded the shipping file before continuing.

Procedure

1. In the menu bar, click **Shipping** > **Shipment History**.
2. On the **View** button to the right of the shipment, click the arrow and select **Unship**.
3. Click **Unship**.

Reports

Reports

The **Reports page** is where you can retrieve data that is stored in your laboratory's LDMS database.

While you can browse specimen information for individual participant visits on the **Specimen Management page**, you can't control what is displayed and how. For example, suppose you need a list of participant identifiers for all participants at your laboratory, and what project those participants belong to. You can't quickly get this information from the Specimen Management page.

This is where reports are helpful. The Reports page allows you to generate pre-defined reports about data in your laboratory's LDMS database. while the content of these reports are predetermined, you can often add criteria to filter what will be displayed. For example, you could generate a report that lets you see all participant identifiers at your laboratory, but only for a specific project.

Custom Report Builder

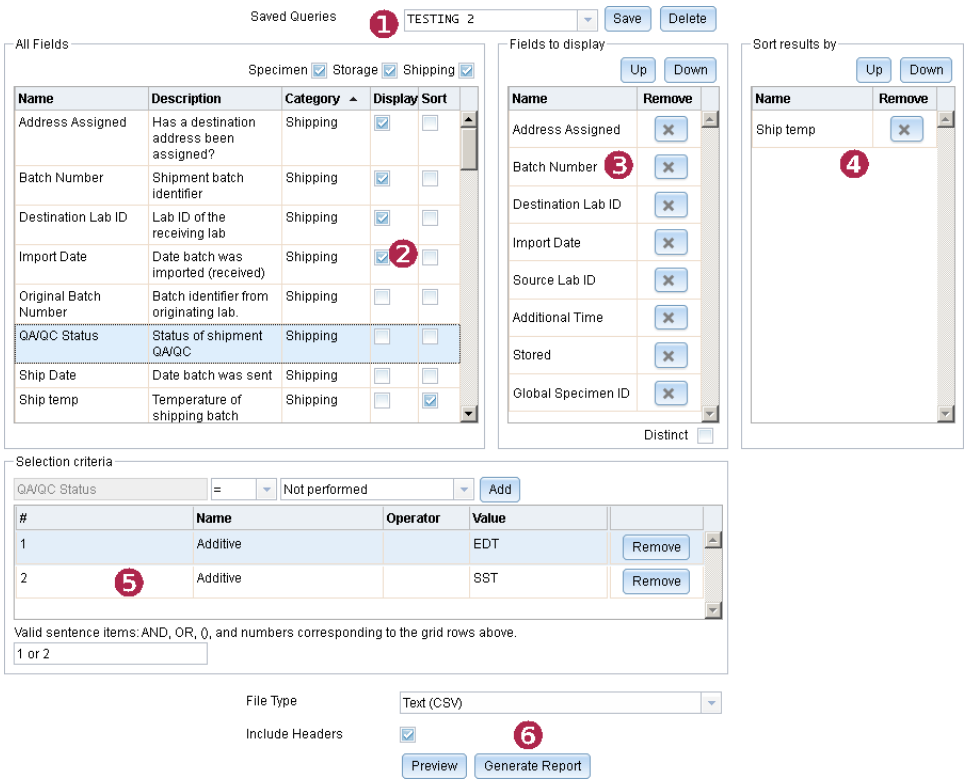
The Custom Report Builder allows you to export specimen data from LDMS into a wide variety of formats.

The custom report builder allows you to do the following:

- specify what data to use to select specimens to appear on the report
- the information to appear on the report
- how to sort information on the report
- apply complex logic to reports

- save custom reports so they can be re-used

Figure 37: The Custom Report Builder



Example custom report

This is an example of a custom report for tracking specimens on shipments that have not been sent.

This report will find all specimens in your laboratory's database that are part of a shipment and are still available. It filters by specimens that are available and have a shipment setup date (all specimens with a shipment setup date will meet the "before 30/Sep/2099" criteria, since that date is in the future). This report would be useful for identifying specimens that you are expected to ship but still have in your possession.

Fields to display

- Global specimen ID
- Batch number
- QA/QC status
- Shipment setup date
- Destination laboratory ID

Sort results by

- Destination laboratory ID
- Batch number

Selection criteria

- Available = Yes
- Destination laboratory ID <> *Your_Laboratory_ID*
- Shipment setup date < 30/Sep/2099

Modifying or deleting a saved report

A saved custom report can be modified and re-saved or deleted.

Procedure

1. From the menu bar, click **Reports** > **Custom Report Builder**.
2. In the **Saved Queries** box, select the report you want to run.
3. Do one of the following:
   - To remove the saved report, click the **Delete** button.
   - To modify the report, make changes to its fields, sort order, or selection criteria, and then click **Save**.
   - To modify the report and save it as a new report, enter a new name into the **Saved Queries** box, and then click **Save**.

Running a saved report

Saved custom report can be run at any time.

Procedure

1. From the menu bar, click **Reports** > **Custom Report Builder**.
2. In the **Saved Queries** box, select the report you want to run.
3. Optional: Make any changes needed to the report's fields, sort order, or selection criteria.

   Changes will not be permanently saved unless you click **Save** at the top of the page.
4. Do one of the following:
   - To view the first 100 records of the report in your browser, click **Preview**.
   - To generate and save the report in the indicated file type, click **Generate Report**.

Creating a custom report

Custom reports are created by indicating the information that should appear on the report, how the report should be sorted, and any special logic for selecting specimens.

Procedure

1. From the menu bar, click **Reports** > **Custom Report Builder**.
2. In the **All Fields** section, do the following:
   - For items that you want to appear on the report, select the check box under **Display**.
   - For items that you want to use to sort records on the report, select the check box under **Sort**.
3. In the **Fields to display** and **Sort results by** section, use the **Up** and **Down** buttons to set the order of items.

   Fields displayed on the report will be shown from left-to-right in the order you specify. Results will be sorted in the order specified. An item can be removed by clicking the **X** next to it or deselecting the check box.

If you sort by **Destination Lab ID** and **Ship Date**, the records on the report will first be sorted by the destination laboratory, and then by the shipment date.

4. Optional: To remove duplicate records, under **Fields to display**, select **Distinct**.

   Any rows on the report that have the same values across all displayed fields will only appear on the report once.

5. Optional: Apply a filter to your report in the **Selection criteria** section.

   If no selection criteria is specified, all data from your laboratory will be included.

   a) In the **All Fields** section, click an item to select it.
   b) In the **Selection criteria** section, select an operator and value for your filter.
   c) Click **Add**.
   d) In the box below the filters, enter logic for applying the filter using the numbers next to each item.

      If you leave this box blank, filters will be applied as `1 AND 2 AND ...` (etc).

      For example, if you want to apply filter #1 and either filters #2 or #3, enter `1 AND (2 OR 3)`.

   To apply a filter that excludes specimens that originated from laboratory 500, select **Source Lab ID** in the **All Fields** section, the **<>** operator, and enter `500`.

6. In the **File Type** list, select the format for your report output.
7. Optional: If you do not want a header row with the name of each column to appear on your report, deselect **Include Headers**.
8. Do one of the follow:

   - To save your report so that it can be run later, enter a name for your report into the **Saved Queries** box at the top of the page, and then click **Save**.
   - To view the first 100 records of the report in your browser, click **Preview**.
   - To generate and save the report in the indicated file type, click **Generate Report**.

Generating a report

All reports are generated by following this procedures

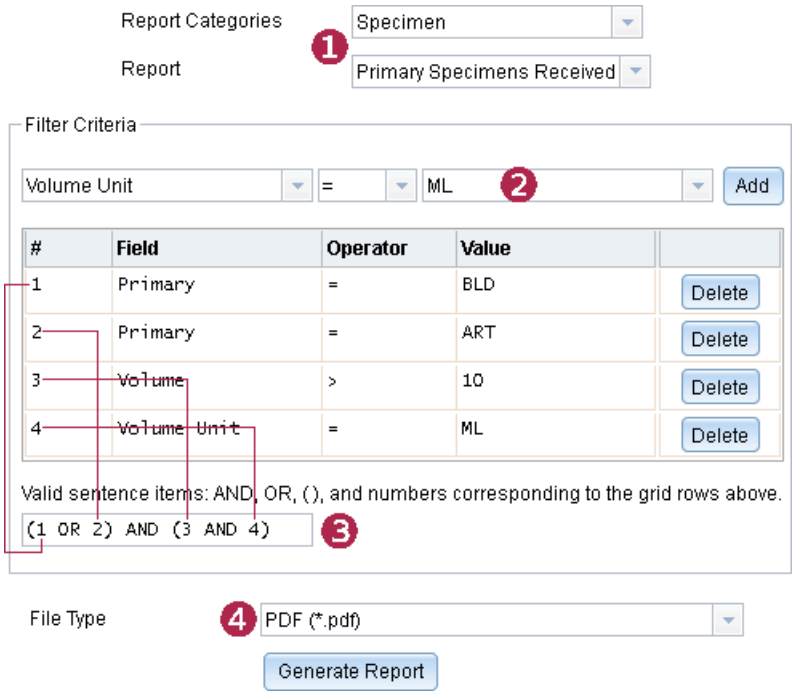
Background

By default, any report is generated using all available data in laboratory's database.

If you want to narrow down the records that will appear on a report, you must apply

filters. If more than one filter is applied, only records that met all of the filters will appear on the report.

Figure 38: The Reports page



In this example, the report that will be generated will contain all BLD or ART specimens that also have a volume greater than 10 mL. (1) Report categories, (2) Add criteria to table below, (3) Logic for generating report, (4) File format for the report

Procedure

1. On the LDMS menu bar, click **Reports** > **Standard Reports**.
2. In the **Report categories** box, select a broad category for the report you want to generate.
3. In the **Report** box select a report.
4. Optional: Add one or more filter to narrow down the information displayed on the report.
   a) Select a data item to filter by from the box below **Filter Criteria**.
   Additional boxes will appear to specify the details for the filter.
   b) Select an operator from the middle box.

   Note: The <> operator means “not equal to”.

   c) Select a value for the filter from the third box.
   The values available will be dependent on the filter. For example, if you are filtering by `Additive`, only valid additives in LDMS will be displayed.
   d) Click the **Add** button.
   Your criteria will be added to the list of filters. If you want to remove it after it has been added, click the **Delete** button to its right.

5. Optional: Specify logic for the report in the box below the filter criteria.
   The logic is formed by using the numbers in the **#** column in the filter criteria, along with the words AND, OR, or parenthesis.
6. Select a format for the report from the **File Type** box.
7. Click the **Generate** button.

Results

The report will be generated in the format that you specified. You may be asked to open or download the report, depending on your web browser's default behavior.

Available report formats

This section describes the file formats in which LDMS can generate reports.

- If you are generating a report from the **Exportable** reprts category, the **Microsoft Excel Workbook Data-only** file type should be used.
- Reports in any category other than **Exportable** are designed for **PDF**.
- Use other file types for reports may result an unexpected formatting, depending on the report. There may also be variations in the file type's format, depending on the specific report.

Table 13: File types for LDMS reports

File type	Extension	Description	Opened by...
Crystal Reports	.rpt	Do not use	N/A
PDF	.pdf	A formatted report intended to be printed on letter size paper (preferred)	A PDF viewer, such as Adobe Reader
Character separated values	.csv	A text file with all information separated by comma characters	A text editor, such as Notepad
Microsoft Excel (97-2003)	.xls	A workbook for versions of Excel prior to Excel 2007; this version contains a header row for each column	Microsoft Excel or LibreOffice Calc
Microsoft Excel (97-2003) Data-only	.xls	Same as above, but usually without a header row	Microsoft Excel or LibreOffice Calc
Microsoft Excel Workbook Data-only	.xlsx	A workbook that will work in Excel 2007 or later (preferred for exportable reports)	Microsoft Excel 2007 or later, or LibreOffice Calc
Microsoft Word (97-2003)	.doc	A Word document with formatting, such as tables and headers; can be difficult to modify, depending on the report	Microsoft Word or LibreOffice Writer
Microsoft Word (97-2003) Editable	.rtf	A rich-text file that can be edited by many word processors; uses less formatting, which makes it easier to modify	Microsoft Wordpad
Rich Text Format	.rtf	Same as Microsoft Word (97-2003) format, but compatible with RTF word processors	Microsoft Wordpad
XML	.xml	A Crystal Reports XML file. The scheme for this format is available	An advanced text editor, such as Notepad++
Tab-separated Text	.ttx	A text file with information separated by tab characters.	A text editor, such as Notepad

Administrative reports

User permissions report

Shows each user account associated with your LDMS laboratory, and the user's access to specific pages in LDMS.

Example

Figure 39: The User Permission Report

User Permissions Report

jdoe	Full	View
Specimen	X	
DataRetrieval	X	
Reports	X	
Administration	X	
Account		
Labels	X	
Shipping	X	
Storage	X	

System Administrator

(1) The user's name. (2) The user's permissions by page. (3) Only present if the user has system administrator privileges.

Related sections

User management on page 117
User accounts are managed by Frontier Science.

Exportable reports

Database dump report

A general report that provides information from all specimens in a laboratory's LDMS database.

Sorting	Available filters	Information on report
-	• ACTG PID • ACTG Protocol • ACTG Protocol Type • Additive • Clinic ID • Derivative • Global Spec ID • Non ACTG PID/ID1 • Non ACTG Prot/ID2 • Other Specimen ID • Primary • Project • Received Date • Ship to Lab Number • Specimen Date	• Project • PID/ID1 • Protoco/ID2 • SID/ID3 • Visit • Visit Unit • Clinic • Rec Date • Rec Time • Draw Date • Draw Time • Import Date • Spec ID • Global Spec ID • PRI

Sorting	Available filters	Information on report
	• Specimen ID • Sub Add/Der • Visit Unit • Visit Value • Volume • Volume Unit	• ADD • DER • SUB • VOL • VOL Unit • Cond • Time • Time Unit • Other Spec ID • Test • Comments • Ship Date • Ship Batch Number • Ship to Lab

Lab 485 aliquot report

Similar to the Specimen Export Report, but sorts the results differently.

Sorting	Filter criteria	Information displayed on report
1. Project **2.** Non-ACTG Protocol **3.** Non-ACTG PID **4.** Visit Value **5.** Primary **6.** Additive **7.** Derivative	• ACTG PID/ID1 • ACTG Protocol • ACTG Protocol Type • Additive • Derivative • Non ACTG PID/ID1 • Non ACTG Prot/ID2 • Primary • Project • Sub Add/Der • Visit Unit • Visit Value	• Project • PID/ID1 • Protocol • SID/ID3 • Visit • Visit [Unit] • Clinic • Received Date • Draw Date • Draw Time • Import Date • Specimen ID • Global Specimen ID • Primary • Additive • Derivative • Sub Additive/Derivative • Volume • Volume Unit • Condition • Time • Time Unit • Other Specimen ID • Test • Comments • Ship Date • Ship Batch • Ship to Laboratory

Lab 485 specimen count report

Provides the number of specimens with a unique primary-additive-derivative-sub A/D combination.

Sorting	Filter criteria	Information displayed on report
1. Project and study combination 2. Participant 3. Visit	• ACTG PID/ID1 • ACTG Protocol • ACTG Protocol Type • Additive • Derivative • Non ACTG PID/ID1 • Non ACTG Prot/ID2 • Primary • Project • Sub Add/Der • Visit Unit • Visit Value • Volume • Volume unit	• PID • Visit • Visit Unit • Primary • Additive • Derivative • Sub Additive/Derivative • Count

Lab 485 specimen count with volume report

Provides the number of specimens with a unique primary-additive-derivative-sub A/D combination, along with total volume.

Sorting	Filter criteria	Information displayed on report
1. Project and study combination 2. Participant 3. Visit	• ACTG PID/ID1 • ACTG Protocol • ACTG Protocol Type • Additive • Derivative • Non ACTG PID/ID1 • Non ACTG Prot/ID2 • Primary • Project • Sub Add/Der • Visit Unit • Visit Value	• PID • Visit • Visit Unit • Primary • Additive • Derivative • Sub Additive/Derivative • Volume • Volume Unit • Count

Primary specimen database dump report

Provides a list of specimen ID numbers for primaries, along with draw dates and received dates.

Sorting	Filter criteria	Information displayed on report
This report is sorted by specimen ID	None	• Specimen ID • Other specimen ID • Draw date • Received date

Sample counts for specified group report

Shows how many specimens for a given derivative type are available for each group locally.

Sorting	Filter criteria	Information displayed on report
This report is organized by project	• Derivative • Project • Received date • Specimen date	• Derivative type • Description of derivative type • Count (number of specimens)

Specimen export report

Designed for pulling information for local groups that have been shipped.

Sorting	Filter criteria	Information displayed on report
This report is sorted by project, then by participant identifier (ID1), and then by specimen ID	• Shipped batch number	• Protocol • Project • Primary type • Derivative type • Additive • Sub additive/derivative type • Draw date • Visit value • Visit unit • Global specimen ID • Original volume • Original volume unit • Available volume • Available volume unit • Clinic • Time • Received date • Participant identifier (ID1) • Protocol identifier (ID2) • Source laboratory • Draw time • Received time

Storage export report

Provides a summary of specimens and their storage location in a laboratory's local database.

Sorting	Filter criteria	Information displayed on report
-	• ACTG PID/ID1 • ACTG protocol • ACTG protocol type • Additive • Derivative • Non ACTG PID/ID1 • Non ACTG Prot/ID2 • OPID • Other specimen ID • Primary • Project • Specimen date	• Specimen ID • Project/Prot • PID/ID1 • OPID • Primary • Additive • Derivative • Sub additive/derivative • Specimen Date • Visit ID • Volume • Time

Sorting	Filter criteria	Information displayed on report
	• Specimen ID • Sub add/der • Visit unit • Visit value • Volume • Volume unit	• Shipped no. • Other specimen ID • Storage location + position

Miscellaneous reports

Clinic contact report

Provides contact information for clinics by clinic ID number.

Sorting	Filter criteria	Information displayed on report
This report is sorted by clinic ID	• Clinic ID	• Clinic ID • Clinic name • Address • Telephone number • Fax number • Contact(s) [including name, phone number, fax number, and email address]

LDMS abbreviated codes report

Provides a list of LDMS unit, visit, time, specimen condition codes used in LDMS and their meaning.

Information displayed on report

Note: The information on this report is identical to the hover text that appears throughout LDMS.

- Measurement codes
- Visit unit codes
- Time unit codes
- Specimen condition codes

Related sections

Specimen conditions on page 45
A specimen condition is a 3-letter code that indicates the status of a specimen.

Terms used in LDMS on page 16
Specimen records are stored as a hierarchy of related participant, enrollment, and information. All of this information for a participant-project combination comprise a record in LDMS.

LDMS primary, additive, derivative, sub additive/derivative codes report

Provides a list of LDMS primary, additive, derivative, and sub additive/derivative codes throughout LDMS.

Information displayed on report

Note: The information on this report is identical to the hover text that appears throughout LDMS.

- Primary codes
- Additive codes
- Derivative codes
- Sub additive/derivative codes

Participant reports

Participant identifiers report

Provides a list of participants in your database by project.

Sorting	Filter criteria	Information displayed on report
This report is sorted by project, and then by ID1	• ACTG PID • ACTG protocol • ACTG protocol type • Non ACTG PID/ID1 • Non ACTG Prot/ID2 • OPID • Project • SID/ID3	• Project • ID1 • ID2 • ID3 • OPID • Clinic

Quick Add Templates

Quick Add Template List Report

This report provides a list of Quick Add templates available to your laboratory.

Sorting	Available filters	Information on report
Alphabetical by template name	• ID2/protocol • Project • Quick Add Template Name • Quick Add template Type	• Quick add template name • Type (local or preset byFrontier Science • [list of enrollment and specimen data that will be populated by the template; this will vary by template]

Shipping reports

Daily imported specimen log report

Shows a list of specimens for a project-protocol combination that have been received from another laboratory in a shipping file.

Sorting	Filter criteria	Information displayed on report
This report is sorted by project-protocol combination, and then by specimen date	• ACTG protocol • ACTG protocol type • Clinic ID • Condition • Global specimen ID • Import date • Non ACTG PID/ID1 • Non ACTG Prot/ID2 • Project • SID/ID3 • Sending lab ID • Specimen date • Specimen ID • Visit unit • Visit value	• Specimen ID • First global specimen ID • Second global specimen ID • Clinic • PID/ID1 • SID/ID3 • Visit • Specimen date • Import date • Sending laboratory • Specimen condition

Detailed imported specimen report

Shows specimens received through a shipping file from another laboratory, sorted by shipment number.

Sorting	Filter criteria	Information displayed on report
This report is sorted by shipment number, and then by specimen ID	• ACTG PID • ACTG protocol • ACTG protocol type • Additive • Condition • Derivative • Import date • Laboratory ID • Non ACTG Prot/ID2 • Other specimen ID • Primary • Project • Shipment number • Specimen date • Specimen ID • Specimen time • Sub additive/derivative • Time • Time unit • Visit unit • Visit value • Volume • Volume unit	• Import batch no. (the shipment number) • Import date • Sending laboratory • Specimen ID • Project/Prot • Primary • Additive • Derivative • Sub additive/derivative • PID/ID1 • VID • Condition • Volume • Specimen date • Specimen time • Other specimen ID • Time/Time unit

Imported specimen report - summary

Shows the number of a specific type of specimen received as part of a shipment from another laboratory.

Sorting	Filter criteria	Information displayed on report
This report is sorted by shipment number	• ACTG protocol • ACTG protocol type • Additive • Derivative • Import date • Non ACTG prod/ID2 • Primary • Project • Sending laboratory ID • Shipment number • Sub additive/derivative	• Sending laboratory • Batch number (shipment number) • Project-protocol combination • Import date • Primary • Additive • Derivative • Sub additive/derivative • Count

Shipped specimen report - detail report

Lists the specimens within a shipment, organized by shipment number.

Sorting	Filter criteria	Information displayed on report
This report is sorted by shipment number, and then by global specimen ID	• ACTG Protocol • ACTG Protocol Type • Additive • Clinic ID • Condition • Derivative • Destination Lab • NON ACTG PID/ID1 • NON ACTG PROT/ID2 • Other Spec ID • Primary • Project • Shipment Date • Shipment Number • Shipping Temp. • Spec Date • Spec ID • Specimen Time • Sub Add/Der • Visit Unit • Visit Value • Volume • Volume Unit	• Shipment batch number • Shipment date • Laboratory shipped to • Clinic • Specimen ID • Other specimen ID • Project/prot • Global specimen ID • PID/ID1 • VID • Specimen Date • Specimen time • Primary • Additive • Derivative • Sub additive/derivative • Volume • Condition

Shipped specimen report - summary report

Shows the number of specimens of a specific derivative type on a shipment that was sent.

Sorting	Filter criteria	Information displayed on report
This report is sorted by shipment number, and then grouped by derivative	• ACTG protocol • ACTG protocol type • Clinic ID • Derivative • Destination laboratory • Non ACTG prot/ID2 • Project • Shipment date • Shipment number • Shipping temperature	• Batch number • Ship date • Destination • Project/protocol • Derivative • Number of specimens shipped

Shipping laboratory contact report

Shows contact information for a given laboratory.

Sorting	Filter criteria	Information displayed on report
This report is sorted by laboratory ID	• Laboratory ID	• Laboratory ID • Laboratory name • Contact (with telephone number and email address) • Address • Room number • Country • Laboratory telephone number • Laboratory fax number

Specimen reports

Cell yield QA/QC summary report

Provides a summary cell yield for viable PBMCs, along with a graph of cell yeild by date, mean, standard deviation, and range.

Sorting	Filter criteria	Information displayed on report
This report is sorted by draw date.	• ACTG protocol • ACTG protocol type • Non ACTG prot/ID2 • Project • Specimen date • Technician initials	• Patid • Draw date • Draw time • Tech • Additive • Total cell count (×106) • Total volume • Comments (from Specimen Management) • Cell yield (×106)

Primary specimens received report

Provides a summary of all primary specimens within a laboratory's database, and the total number of primaries.

Sorting	Filter criteria	Information displayed on report
This report is sorted by project-protocol combination, and then by specimen ID	• ACTG PID • ACTG protocol • ACTG protocol type • Additive • Clinic ID • Condition • Import date • Non ACTG PID/ID1 • Non ACTG Prot/ID2 • OPID • Other specimen ID • Primary • Project • Received date • SID/ID3 • Specimen date • Specimen ID • Visit unit • Visit value • Volume • Volume unit	• Specimen ID • Project/protocol • PID/ID1 • Clinic • Global specimen ID • Visit • Specimen date • Received date • Primary • Additive • Specimen condition • Volume • Other specimen ID • Comments (from the **Specimen Management** page)

Specimen count report

Should the number of aliquots entered, stored, and shipped by your laboratory by project-protocol combination, as well as the total across all projects and protocols.

Sorting	Filter criteria	Information displayed on report
This report is sorted by project-protocol combination	• ACTG protocol • ACTG protocol type • Clinic ID • Derivative • Project • Specimen date	• Project/protocol combination • Number of aliquots entered into LDMS • Number of currently stored aliquots • Number of shipped aliquots

Specimen log report

Provides detailed information about every primary and aliquot within a laboratory's database.

Sorting	Filter criteria	Information displayed on report
This report is sorted by project-protocol combination, then by draw date, and then grouped by primary.	• ACTG PID • ACTG protocol • ACTG protocol type • Additive • Clinic ID • Condition • Derivative • Global specimen ID • Import date • Non ACTG PID/ID1	• PID/ID1 • Project/prot • SID/ID3 • VID • Clinic • OPID • Primary specimen ID • Global specimen ID • Specimen time • Specimen date

Sorting	Filter criteria	Information displayed on report
	• Non ACTG Prot/ID2 • OPID • Other specimen ID • Primary • Project • Received date • SID/ID3 • Shipped • Specimen date • Specimen ID • Specimen time • Sub add/der • System entry date • Test ordered • Time • Time unit • Visit unit • Visit value • Volume • Volume unit	• Received date • Primary volume • Time/time unit • Other specimen ID • Comments [for primary specimen] • Aliquot specimen ID • Global specimen ID • Other specimen ID • Primary/additive • Derivative/Sub-additive/derivative • Current volume • Condition • Group/prot • Test(s) ordered • Shipped • Comments

Specimen processing report

Provides processing information (processing date, frozen date, etc) for primaries and aliquots in a laboratory's database.

Sorting	Filter criteria	Information displayed on report
This report is sorted by project-protocol combination, then by draw date, and then grouped by primary.	• ACTG PID/ID1 • ACTG protocol • ACTG protocol type • Additive • Derivative • Global specimen ID • Import date • Non ACTG PID/ID1 • Non ACTG Prot/ID2 • Other specimen ID • Primary • Project • Received date • SID/ID3 • Specimen date • Specimen ID • Visit unit • Visit value	• PID/ID1 • Project/Prot • SID/ID3 • VID • Clinic • OPID • Primary specimen ID • Global specimen ID • Other specimen ID • Primary • Additive • Volume • Specimen date • Specimen time • Received date • Received time • Total cell count • Proc[essing] date • Proc[essing] time • Proc[essed] by • Aliquot specimen ID • Global specimen ID • Other specimen ID • Derivative • Sub-additive/derivative • Volume • Group/prot

Sorting	Filter criteria	Information displayed on report
		• Frozen date • Frozen time • Proc[essing] date • Proc[essing] time • Proc[essing] by

Specimens for a given group report

Shows the aliquots for a given project-protocol combination.

Sorting	Filter criteria	Information displayed on report
This report is grouped by project-protocol combination, and then sorted by ID1, and then by specimen ID.	• ACTG PID • ACTG protocol • ACTG protocol type • Additive • Clinic ID • Derivative • Import date • Non ACTG PID/ID1 • Non ACTG prot/ID2 • OPID • Other specimen ID • Primary • Project • Received date • SID/ID3 • Specimen date • Specimen ID • Specimen time • Sub additive/derivative • Visit unit • Visit value	• Protocol (and project) • PID/ID1 • OPID • Specimen ID • Global specimen ID • Specimen date • Specimen time • Primary • Additive • Derivative • Sub additive-derivative • Received date • Received time • Import date • VID (visit value and unit) • Other specimen ID

Specimens for a given group 2

Shows the aliquots for a given project-protocol combination in aggregate form, with the number of aliquots with a given specimen ID.

Sorting	Filter criteria	Information displayed on report
This report is grouped by project-protocol combination, then grouped by Specimen ID, and then sorted by ID1, and then by specimen ID.	• ACTG PID • ACTG protocol • ACTG protocol type • Additive • Clinic ID • Derivative • Import date • Non ACTG PID/ID1 • Non ACTG prot/ID2 • OPID • Other specimen ID • Primary • Project	• Protocol (and project) • PID/ID1 • OPID • Specimen ID • Count • Specimen date • Specimen time • SID/ID3 • Primary • Additive • Derivative • Sub additive-derivative • Received date

Sorting	Filter criteria	Information displayed on report
	• Received date • SID/ID3 • Specimen date • Specimen ID • Specimen time • Sub additive/derivative • Visit unit • Visit value	• Received time • Import date • VID (visit value and unit) • Other specimen ID

Time to freeze QA/QC summary report

Shows the time to freeze for aliquots, along with a graph and summary of overall time to freeze.

Sorting[1]	Filter criteria	Information displayed on report
-	• ACTG protocol • ACTG protocol type • Non ACTG prot/ID2 • Project • Specimen date • Tech initials	• Patid • Draw date • Draw time • Frozen date • Frozen time • Time to freeze (in minutes) • Tech • Additive • Derivative • Comments

Time to process QA/QC summary report

Shows the time to process for aliquots, along with a graph and summary of overall time to process.

Sorting[2]	Filter criteria	Information displayed on report
-	• ACTG protocol • ACTG protocol type • Non ACTG prot/ID2 • Project • Specimen date • Tech initials	• Patid • Draw date • Draw time • Process time • Frozen time • Time to process (in minutes) • Tech • Additive • Derivative • Comments

Shipping reports

Specimens not in storage report

Shows specimens that are available in a laboratory's database, but have not had a storage location assigned on the **Storage** page.

Sorting	Filter criteria	Information displayed on report
This report is grouped by project-protocol combination, and then by specimen ID, and then sorted by global specimen ID.	• ACTG protocol • ACTG protocol type • Additive • Condition • Derivative • Non ACTG PID/ID1 • Non ACTG prot/ID2 • Primary • Project • Specimen ID • Status • Sub additive/derivative • Visit unit • Visit value • Volume • Volume unit	• Project/prot • Specimen ID • Global specimen ID • PID/ID1 • Specimen date • Pri[mary] • Add[itive] • Der[ivative] • Sub a[dditive]/d[erivative] • VID (visit unit and value) • Volume • Condition • Status

Related sections

Assigning a storage location to specimens on page 60

Individual specimens are added to containers on the **Storage** page.

Specimens remaining in storage report

Shows the number of aliquots for a given participant with a storage location assigned in a laboratory's database.

Sorting	Filter criteria	Information displayed on report
This report is grouped and sorted by project, ID1, and protocol.	• ACTG PID/ID1 • ACTG protocol • ACTG protocol type • Additive • Non ACTG PID/ID1 • Non ACTG prot/ID2 • OPID • Primary • Project • Specimen date	• Project • PID • Protocol • Volume • Volume unit • Derivative • Aliquots remaining in storage

Specimens in storage per PID report

Shows the number for a given project-participant combination that have a storage location assigned in a laboratory's database.

Sorting	Filter criteria	Information displayed on report
This report is sorted by project, and then by participant.	• ACTG PID/ID1 • ACTG protocol • ACTG protocol type • Non ACTG PID/ID1 • Non ACTG prot/ID2 • OPID	• Project • PID • Count (number of aliquots)

Sorting	Filter criteria	Information displayed on report
	• Primary • Project	

Storage container location report

Shows the storage location for all containers in a laboratory's database.

Sorting	Filter criteria	Information displayed on report
This report is sorted by storage unit name, and then by container position.	• ACTG protocol • ACTG protocol type • Freezer name • Level name • Non ACTG prot/ID2 • Project • Sublevel name	• Storage location • Container name • Position

Storage count report by freezer

Shows the number of specimens stored in a given storage unit for a given project-protocol combination.

Sorting	Filter criteria	Information displayed on report
This report is sorted by storage unit, and then by project-protocol combination, and then by derivative.	• ACTG PID/ID1 • ACTG protocol • ACTG protocol type • Derivative • Non ACTG PID/ID1 • Non ACTG prot/ID2 • Project	• Freezer • Project/protocol • Primary • Additive • Derivative • Sub a[dditive]/d[erivative] • Count

Storage detail report

Shows detailed information about the contents of containers in storage units.

Sorting	Filter criteria	Information displayed on report
This report is sorted by storage location, and then by storage position.	• ACTG PID • ACTG protocol • ACTG protocol type • Additive • Derivative • Import date • Non ACTG PID/ID1 • Non ACTG Prot/ID2 • OPID • Other specimen ID • Primary • Project • Received date • SID/ID3 • Shipment number • Specimen date	• Storage location • Specimen ID • Global spec[imen] ID • Project/prot • PID/ID1 • VID/unit • Prim[ary] • Add[itive] • Der[ivative] • Sub a[dditive]/d[erivative] • Volume • Ship • Storage date • Spec[cimen] date • Time • Clinic

Sorting	Filter criteria	Information displayed on report
	• Specimen ID • Specimen time • Stored date • Sub add[itive]/der[ivative] • Visit unit • Visit value • Volume • Volume unit	• Pos[ition] • Other specimen ID

Labels

Labels

The **Labels** page is used to print labels for specimens, and define what those labels should look like.

Understanding label formats

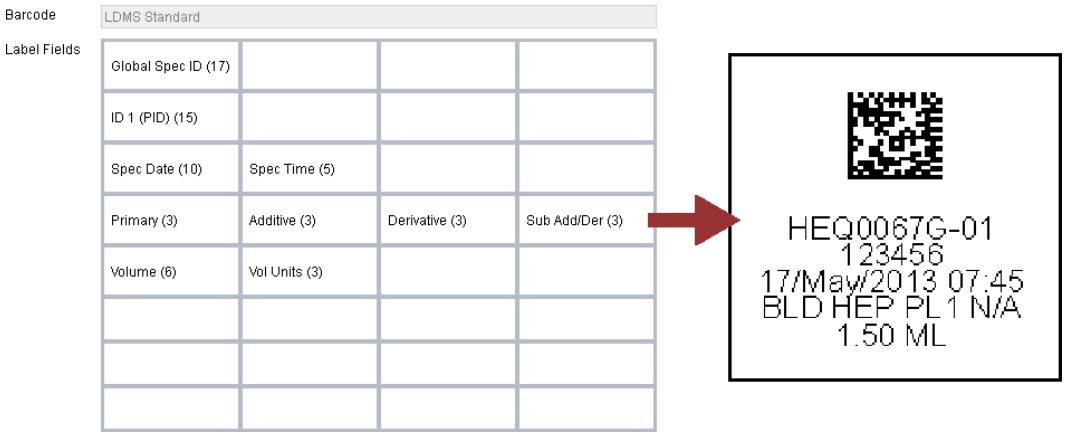
Specimen labels can be produced that contain a wide array of information.

Label formats

Labels are setup like grids, with items that appear on the label occupying one cell.

Items that can appear are most of the information that can be found on the **Specimen Management** page, such as the primary type and the received date and time. Each row on a label can hold up to four items, and a label can have up to 8 rows.

Figure 40: Label definition and corresponding output



A label as it is set up in LDMS (left) compared to a generated label (right). The colored background shows how each item in the label definition matches up to the item on the label.

Barcodes

LDMS supports generating 2D barcodes on labels

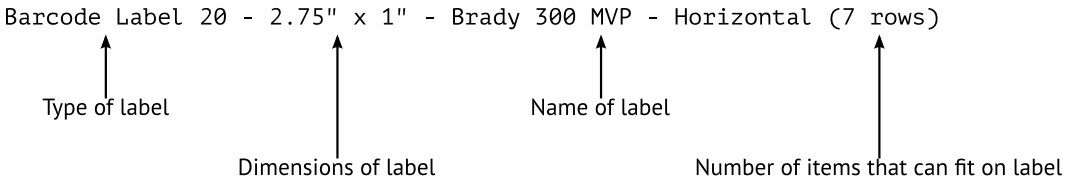
If a label has a barcode, it will appear as the first item on the label. The barcodes generated by LDMS contain the specimen's *global specimen ID*.

Label sizes

Labels can be generated in a variety of common sizes.

The label's name in LDMS indicates information about its size, manufacturer, and use.

Figure 41: Example label name



There are three types of labels available:

Laser labels	For printing using a desktop printer with special 8.5-by-11-inch paper
Barcode labels	For printers specifically made for printing labels
Dot matrix labels	For use with dot matrix printers

Note: If you choose a label format that has a barcode, only barcode labels can be selected.

For laser and dot matrix labels, the size of the label refers to the label itself, not the paper it will be printed on. These labels are generated in US letter size paper (8.5-by-11-inches), with the assumption that the user is using special label paper that can be pealed apart. Barcode labels, on the other hand, require special printers and label paper that are designed exclusively for printing labels.

How to use a barcode reader with LDMS

LDMS supports using any Windows compatible barcode reader

Barcode readers that are compatible with Windows will extract the global specimen ID from the 2D barcodes that are generated by LDMS. You can test this yourself by opening Notepad and scanning a barcode. Doing so will cause the global specimen ID from the barcode to appear in Notepad.

In any place in where you would need to type a global specimen ID, you can use a barcode reader to input the ID instead. Select the box where you want the global specimen ID to appear, and then scan the barcode. This can help avoid errors when trying to type out a global specimen ID using the keyboard.

Printing labels anywhere

Specimen labels can be printed in many places in LDMS, not just the Labels page.

Labels can be printed almost anywhere in LDMS where you can interact with specimens.

- On the Specimen Management page, click the down arrow next to any of the **Edit** buttons, and then select **Print Labels**. This will print all labels associated with that item. For example, if you select **Edit Participant** > **Print labels**, you will print the labels for all specimens associated with that participant. Likewise, if you click **Edit [primary]** > **Print Labels**, you will print all labels associated with that primary.
- On the Storage page, click the down arrow next to **Edit** button next to any storage item, and then click **Print Labels**. This will allow you to print labels for all specimens stored at that location.
- On the Pending Shipments page, click the down arrow next to the **Edit/Ship** button next to a shipment, and then click **Print Labels**.

When creating labels, specimens that are not available will not be included.

Related sections

Generating labels (from the Labels page) on page 110
You can use the **Labels** page to print labels using more complex logic than can be used in other places.

Generating labels (from the Labels page)

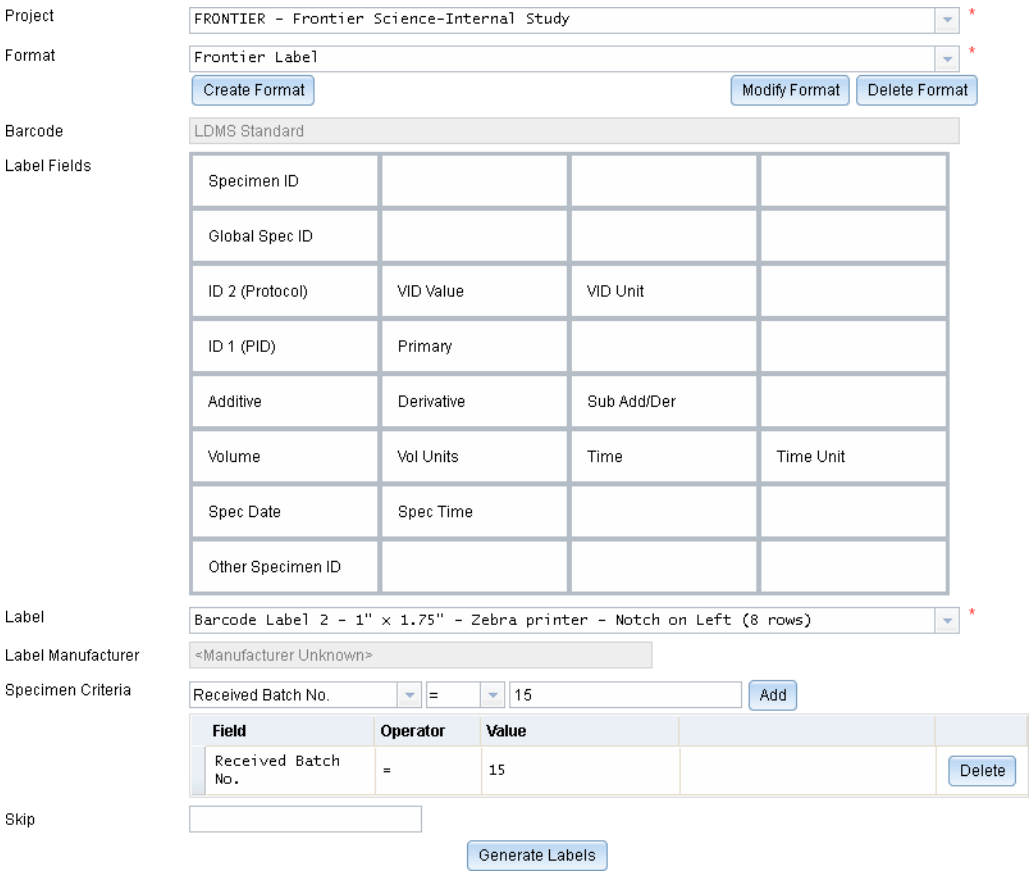
You can use the **Labels** page to print labels using more complex logic than can be used in other places.

Background

If you want to generate labels, you generally want to do so on either the **Specimen Management**, **Storage**, or **Shipping** page. On these pages, you can create labels for a specific participant, a particular shipping or storage container, or an individual shipment. These are the most common scenarios for which you will need to generate labels.

There may be times where you need to generate labels from a variety of sources. For example, you may want to print labels for all specimens received on a specific day. The **Labels** page allows more complex logic for selecting the labels to print.

Figure 42: The label generation page



Procedure

1. Select the project for which you are generating labels from the **Project** box.
2. Select a type of label from the **Format** box.
   The **Label Fields** section will show a preview of the labels.
3. Select a label paper type and size from the **Label** box.
4. Add search criteria to determine which specimens should have labels printed.
   For example, to print labels for blood specimens that your laboratory received on 04-Mar-2014, you would apply the filter `Received date = 04/Mar/2014` and `Primary = BLD`.
   a) Select the information to filter from the first box, such as received date.
   b) Select the logic for how the filter should be applied from the middle box.

      Note: The operator **<>** means “not equal to”.

   c) Select the filter value from the third box.
   d) Click the **Add** button.

The filter will appear at the bottom of the page. To remove a filter, click the **Delete** button to its right.

5. Optional: If you want to skip some labels, enter a number into the **Skip** box.

   This will skip the number of spaces specified, which is useful if you need to print labels on a partial sheet. For example, if you have sheet where you already used the first 3 labels, you can skip them so that printing begins on the 4th label.

6. Click the **Generate** button

Results

You will be prompted to save a PDF file that contains the labels or it may open automatically, depending on the default behavior of your web browser.

Note: Specimens that are not available will not have labels generated.

Related sections

Printing labels anywhere on page 109

Specimen labels can be printed in many places in LDMS, not just the Labels page.

Defining new label formats

You can create new label formats.

Procedure

1. Optional: Select a **Project** and **Format** that you want to use as the basis for your new label.

   If you chose a **Project** and **Format**, you can copy all of the information from this label to your new label to use as a starting point.

2. Click the **Create Format** button.
   The **Create Format** window will open. If you selected a label format to use as the basis for your new format, you will see the name of that label in the **Source format** box. If you did not select a base label then the **Source format** will not appear.
3. Enter a name for your new label format into the **Name** box.
4. Optional: If you want to copy the fields from the source format, select the **Copy Fields** box.
5. Click the **Create Format** button.

Results

Your new label format will be created and will be available for selection.

What to do next

You will want to customize your new label format and define the information that will appear on it.

Related sections

Terms used in LDMS on page 16

Specimen records are stored as a hierarchy of related participant, enrollment, and information. All of this information for a participant-project combination comprise a record in LDMS.

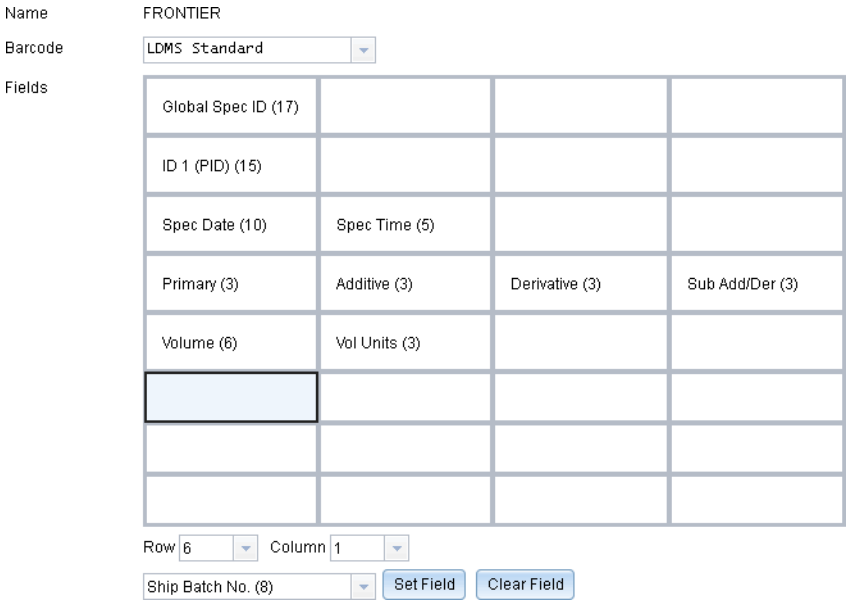
Customizing label formats

You can customize that information that appears on label formats created by your laboratory.

Background

New label formats are blank when they are created. You must customize the format to show the information that you want displayed. New labels and existing labels are modified the same way. Only label formats that your laboratory created can be modified. Label formats that are pre-defined in LDMS cannot be changed.

Figure 43: The label modification page



Procedure

1. Click **Labels** from the LDMS menu bar.
2. Select a locally defined project from the **Project** box.
3. Select the label format to be customized from the **Format** box.
4. Click the **Modify Format** button.
   The **Create Format** window will open.
5. Modify the label format as needed.

- To add a field to a label, select a box from the **Fields** section where you want the information to appear. Select an item from the box below the **Fields** section, and then click the **Set Field** button.
- To remove a field, select it from the **Fields** section, and then click the **Clear Field** button.

6. Click the **Modify Format** button.
   Your changes will be saved and the **Create Format** window will close.

Setting the default label format for a project

The default label format and stock size can be set for individual projects.

Background

This means that when you print labels for that project, the default format and size will automatically be selected. If you typically use the same format and size for a specific project's labels, then you can save time by defining these defaults.

Procedure

1. From the menu bar, click **Labels** > **Label Setup**.
2. In the **Project** box, select the project to set defaults.
3. In the **Format** box, select the applicable default label format.
4. In the **Label** box, select the applicable default label stock size.
5. Click **Add Default**.

Administration

Administration

The **Administration** page is where you can manage various settings in LDMS

Projects

Projects are the collaborative group, organization, or network that conduct studies.

There are two types of projects: *local projects* and *government projects*.

Figure 44: The Projects page.

Name	Description	ID1 (1)	ID2 (2)	ID3 (3)	Export	Local	In Use	
PHIA	Population-Based HIV Impact Assessments	PTID	Country	HIVRT	✓		✓	View
CONTROL	CONTROL	CONTROLNAME	PROTOCOL	ID3	✓		✓	View
UNKNOWN	Unknown Group	ID1	ID2	ID3				View
FRONTIER	Frontier Science-Internal Study	PID	Study			✓	✓	Edit
cadmus	cadmus	pid	prot	sid		✓		Edit
XLOCAL	XLOCAL	ID1	ID2	ID3		✓	✓	Edit

(1) Whether data is copied into Frontier Science's central database (2) Whether the project is a government or local project (3) Whether there are specimens currently using the projects.

Local projects

Local projects are *projects* that only exist at your laboratory.

A local project is one that has been defined by your laboratory. These are general used for internal studies that only your laboratory will utilize, although they can be sent to other laboratories through shipments.

Defining a new local project requires you to specify what you are going to call *ID1*, *ID2*, and *ID3*.

Table 14: Identifiers

Identifier	Description	Example
ID1	Uniquely identifies a participant or specimen source	Participant ID
ID2	Identifies the study in which the participant is enrolled	Study number
ID3	Used to further identify a branch or sub-unit in a study	Sub-study number

While there are no rules for what you can name each identifier, they must be used for these purposes. For some projects, it may be more appropriate to think of ID1 as identifying the source from which specimens were collected, such as a testing solution that you received, rather than a participant.

Creating a new project

New projects can be created on the **Project Administration** page.

Procedure

1. Click **Administration** > **Projects** from the LDMS menu bar.
2. From the LDMS action menu, select **Create project**.
   The **Create Project** window will open.
3. Enter the name of the project as you would like it to appear in menus throughout LDMS into the **Name** box.
4. Enter a brief description of the project into the **Description** box.

The description is generally used to provide the full name of the project, especially when the project is an acronym.

5. Enter the name that you want to use for *ID1* for the group into the **ID1 Name** box, and a brief description into the **ID1 Description** box.

   ID1 is typically used as an identifier for a participant. For other types of work, such as quality control testing, ID1 could also be something else, like a testing panel number.

6. Enter the name that you want to use for *ID2* into the **ID2 Name** box, and a brief description into the **ID2 Description** box.

   ID2 is typically used for a study or protocol identifying number.

7. Enter the name that you want to use for *ID3* into the **ID3 Name** box, and a brief description into the **ID3 Description** box.

   ID3 is typically used as a sub-study or sub-protocol identifying number.

8. Click the **Save** button.

Results

The new group will be added to the list of groups that you specified.

Modifying and removing a project

Local project can be modified or removed after they are created

Before you begin

A local project can only be removed if it is not currently in use. Government projects cannot be modified or removed.

Background

This might be needed if there was a mistake with the way the project was initially entered or if you need to update the descriptions for the participant fields. Changes made to a project will automatically update existing participant records in LDMS.

Procedure

1. Click **Administration** > **Projects** from the LDMS menu bar.
2. Locate the project to be modified or removed from the list of projects.
3. Do one of the following:
   - To modify the group, click the **Edit** button to the right of the project. The **Edit Project** window will open, where you can make your changes. When you are done, click the **Save** button.
   - To remove the project, select **Delete** from the **Edit** menu to the right of the project.

Government projects

Government projects are those that are defined by Frontier Science.

Frontier Science works with government-funded projects to define the rules and specifications for their project. These projects cannot be modified or removed by users. Even though they cannot be modified, they will still be visible on the **Projects** page.

User management

User accounts are managed by Frontier Science.

Accounts for individual users are created and maintained by LDMS User Support. To perform the following tasks, you would need to contact LDMS User Support for assistance:

- Create a new user
- Reset a user's password
- Manage what features in LDMS a user can access

Users can modify their own passwords from within LDMS.

Changing your password

Users can modify their own passwords from within LDMS

Background

While the creation and management of user accounts is handled outside of LDMS, users can change their passwords on their own without contacting LDMS User Support.

Procedure

1. From the logout menu in the upper-right corner of the page, select **Change Password**

   Figure 45: The Logout menu

   The **Change password** window will open.
2. Enter your current password into the **Password** box.
3. Enter your new password into the **New Password** box.
4. Re-enter your new password into the **Confirm Password** box.
5. Click the **Change Password** button.

Related sections

User management on page 117
User accounts are managed by Frontier Science.

Password requirements

This section explains the requirements for user passwords.

- Passwords must contain at least one upper case letter, one lower case letter, one number, and one special character
- A password must not be the same as one of the your previous passwords
- A password must be between 10 and 50 characters
- Must not be similar to your current password, user ID, or display name

Temporary passwords expire within 24 hours. If you do not sign into LDMS using the temporary password before it expires, you must have a new temporary password generated.

Related sections

User management on page 117
User accounts are managed by Frontier Science.

Preset projects

Preset projects

Preset projects are projects that are built into LDMS that have special rules and requirements.

Preset projects and their requirements cannot be modified or removed by users. These projects and designed based on the needs of a specific project working with Frontier Science. An example of a preset project is ACTG/IMPAACT. Specimens created until this project have specific requirements, which are defined by ACTG and IMPAACT. These requirements are implemented in LDMS to accommodate the needs of the project.

The rules for preset projects fall into two categories:

- Validation rules that can be enforced by LDMS, such as requiring that ID1 be formatted a certain way
- Requirements that cannot be enforced by LDMS, such as requiring specimens to be entered within a certain period of time after they are received by your laboratory.

Important: The information for individual projects provided here are for convenience only. Always refer to guidance provided by the project for the must up-to-date instructions.

ACTG/IMPAACT

The ACTG/IMPAACT preset project has these requirements.

Data entry requirements

Field	Required?	Note
ID1 (PID)	Required	8 characters long, 7 numbers and one letter between A and L; if the PID does not have 7 numbers, add leading zeros to the front of it.
ID2 (Protocol)	Required	Select from the pre-defined list of protocols.
ID3 (SID)	Required	Study Identifier; LDMS will remember previously entered SIDs and automatically populate ID3 when the same project-PID-protocol combination is entered. If you do not know the SID or a SID has not yet been assigned, enter `NOSID`.
Visit	Required	Select from pre-defined list of visit units.
OPID	Available	--
Clinic	Required	LDMS will automatically populate the clinic using one previously entered for the same PID, protocol, and SID combination.
Specimen Time	Depends	If you do not have a specimen time recorded on your CRF, contact the clinic that collected the specimen from the participant. This field is required for specimens with a specimen date of 01 January 2004 or later; it is optional for specimens prior to that date. This requirement can be overridden for specimens after this date, if necessary.
Received Time	Optional	--

Notes

- ACTG/IMPAACT uses the standard LDMS Shipping File format to ship between ACTG and IMPAACT laboratories using LDMS.
- ACTG/IMPAACT requires specimens to be labeled with a 2D barcode and label from LDMS; LDMS comes with label formats for ACTG setup and ready to use.
- ACTG and IMPAACT are listed as a combined project throughout LDMS (ACTG/IMPACT).
- Preloads are permitted for the ACTG/IMPAACT project, but users are not permitted to create their own. All ACTG preloads are created by Frontier Science in collaboration with network leadership. For more information about preloads, see *the section called "Preloads: Templates for Expected Specimen Collections"*.

AERAS

The AERAS preset project has these requirements.

Data entry requirements

Field	Required?	Note
ID1 (PID)	Required	11-digits of any combination of letters and numbers.
ID2 (Study)	Required	Selected from pre-populated list. Once selected, the LDMS will check that the PID is associated with the selected protocol.
ID3	Disabled	This field is not used by Aeras
Visit	Required	Select from pre-defined list of visit units.
OPID	Disabled	This field is not used by AERAS
Clinic	Required	AERAS clinics are in the format ARSXX, where XX are the 5th and 6th digits from the PID
Specimen Time	Required	--
Received Time	Optional	--

Notes

Quick Add templates can be used for Aeras.

AIEDRP

The AIEDRP preset project has these requirements.

Data entry requirements

Field	Required?	Note
ID1 (PID)	Required	Must either pass the ACTG/IMPAACT or HPTN ID1 validation check, depending on the protocol
ID2 (Protocol)	Required	Will determine what ID1 format should be used
ID3 (SID)	Required	Must be `NOSID` or pass the ID1 validation
Visit	Required	--
OPID	Optional	--
Clinic	Optional	--

Field	Required?	Note
Draw Time	Optional	--
Received Time	Optional	--

Protocol and ID1 check used

Protocol	ID1 validation used
I03005	ACTG/IMPAACT
I03006	ACTG/IMPAACT
I03007	ACTG/IMPAACT
I03008	ACTG/IMPAACT
I03010	Either
I03011	Either
CORE01	Either
AIN501	Either
AIN502	Either
AIN503	Either
AIN504	Either

AMC

The AMC preset project has these requirements.

Data entry requirements

Field	Required?	Note
ID1 (ID1)	Required	--
ID2 (PROTOCOL)	Optional	--
ID3 (ID3)	Optional	--
Visit	Optional	--
OPID	Optional	--
Clinic	Optional	--
Draw Time	Optional	--

Field	Required?	Note
Received Time	Optional	--

ATN

The ATN preset project has these requirements.

Data entry requirements

Field	Required?	Note
ID1 (PID)	Required	A 6-digit number between 10001 and 999999. If the PID is less than 6 digits, leading zeros will automatically be added. LDMS will check that the PID is valid.
ID2 (Protocol)	Required	Must be a 3 digit number between 004 and 999
ID3 (SID)	Required	An 8-digit number between 40001 and 999999999. If the SID is less than 8-digits, leading zeros will automatically be added. 7-digit SIDs can still be imported by LDMS. If the same PID-protocol combination has been entered, LDMS will automatically default to the previously used SID. `NOSID` is a valid entry for ATN.
Visit	Required	Select from pre-defined list of visit units.
OPID	Available	--
Clinic	Optional	--
Specimen Time	Required	--
Received Time	Optional	--

Notes

Quick Add templates can be used for ATN.

BM

The BM preset project has these requirements.

Data entry requirements

Field	Required?	Note
ID1 (studyID)	Required	Must be in the BM studyID format
ID2 (ID2)	Optional	--
ID3 (ID3)	Optional	--
Visit	Optional	--
OPID	Optional	--
Clinic	Optional	--
Draw Time	Optional	--
Received Time	Optional	--

BM ID1 format

BM-XXX-Y

BM	Must be “BM”
XXX	Any 3 digits
Y	0 for mother; 1 to 9 for child

CEMALB

The CEMALB preset project must meet these requirements.

Data entry requirements

Field	Required?	Note
ID1 (PID)	Required	Must be 5 characters
ID2 (Protocol)	Required	--
ID3 (Visit)	Optional	--
Visit	Optional	--
OPID	Optional	--
Clinic	Optional	--
Draw Time	Optional	--
Received Time	Optional	--

CHAVI

The CHAVI preset project must meet these requirements.

Data entry requirements

Field	Required?	Note
ID1 (PID)	Required	Must pass HPTN ID1 validation and must be 9 characters in length
ID2 (Protocol)	Required	Validated using ID1, where ID2 is embedded into ID1 as either the 4th or 4th and 5th digits, depending on the protocol
ID3 (ID3)	Optional	--
Visit	Required	--
OPID	Optional	Must be empty until the protocol is 008A
Clinic	Optional	--
Draw Time	Optional	--
Received Time	Required	--

CIPRA-HT

The CIPRA-HT preset project has these requirements.

Data entry requirements

Field	Required?	Note
ID1 (PID)	Required	Must pass HPTN ID1 validation
ID2 (Protocol)	Required	--
ID3 (SID)	Required	Must pass ACTG/IMPAACT ID3 validation
Visit	Optional	--
OPID	Optional	--
Clinic	Required	--
Draw Time	Optional	--
Received Time	Optional	--

CIPRA-ZA

Short reference description.

Data entry requirements

Field	Required?	Note
ID1 (PID)	Required	--
ID2 (CP#)	Optional	--
ID3 (SID)	Optional	--
Visit	Optional	--
OPID	Optional	--
Clinic	Optional	--
Draw Time	Optional	--
Received Time	Optional	--

CIPRA

The CIPRA preset project must meet these requirements.

Data entry requirements

Field	Required?	Note
ID1 (PID)	Required	Must be 9 characters in the CIPRA ID1 format
ID2 (Protocol)	Required	In the format P[0-10]
ID3 (ID3)	Optional	--
Visit	Required	--
OPID	Optional	--
Clinic	Optional	--
Draw Time	Optional	--
Received Time	Optional	--

CIPRA ID1 format

AABBCCCCD

AA	01 to 99

BB	01 to 99
CCCC	0001 to 9999
D	0 to 9

CONTROL

The CONTROL preset project must meet these requirements.

Data entry requirements

Field	Required?	Note
ID1 (CONTROLNAME)	Required	--
ID2 (PROTOCOL)	Optional	--
ID3 (ID3)	Optional	--
Visit	Optional	--
OPID	Optional	--
Clinic	Optional	--
Draw Time	Optional	--
Received Time	Optional	--

CPCRA

The CPCRA preset project has these requirements.

Data entry requirements

Field	Required?	Note
ID1 (PID)	Required	--
ID2 (Study)	Optional	--
ID3 (Bth/Sex)	Optional	--
Visit	Optional	--
OPID	Optional	--
Clinic	Optional	--
Draw Time	Optional	--
Received Time	Optional	--

CPQA

The CPQA preset project has these requirements.

Data entry requirements

Field	Required?	Note
ID1 (PanelID)	Required	Must be five characters in length in the format [Round_#][Panel_alpha_ID][2_numbers], such as `22A00`
ID2 (RoundNo)	Required	This is the same as the first 2 digits of the PanelID. This field will automatically be populated by LDMS.
ID3 (ExpDate)	Optional	--
Visit	Optional	Select from pre-defined list of visit units.
OPID	Optional	--
Clinic	Optional	--
Specimen Time	Optional	--
Received Time	Optional	--

Notes

- CPQA use the LDMS shipping file format
- There are CPQA barcode options available in LDMS.
- Quick Add templates can be used for CPQA, however users are not expected to use this feature.
- The*Pharmacology Proficiency Results* report can be generated from LDMS for Clinical Laboratory Improvement Amendments (CLIA). This is sometimes referred to as the “CLIA Report”.

FACTS

The FACTS preset project has these requirements.

Data entry requirements

Field	Required?	Note
ID1 (PID)	Required	A 7-digit number. LDMS will verify that the PID is valid.

Field	Required?	Note
ID2 (Study)	Required	Select from pre-populated list
ID3	Disabled	This field is not used by FACTS
Visit	Required	Select from pre-defined list of visit units.
OPID	Disabled	This field is not used by FACTS
Clinic	Disabled	This field is not used by FACTS
Specimen Time	Required	--
Received Time	Optional	--

Notes

- Quick Add templates can be used for FACTS.

HN

The HN preset project must meet these requirements.

Data entry requirements

Field	Required?	Note
ID1 (studyID)	Required	--
ID2 (ID2)	Optional	--
ID3 (ID3)	Optional	--
Visit	Optional	--
OPID	Optional	--
Clinic	Optional	--
Draw Time	Optional	--
Received Time	Optional	--

HPTN

The HPTN preset project has these requirements.

Data entry requirements

Field	Required?	Note
ID1 (PID)	Required	LDMS performs a checks to make sure the PID is valid. Based on the protocol, LDMS will determine whether a 9-digit or 10-digit PID must be used.
ID2 (Protocol)	Required	Special PID checks are enforced if the protocol is 043.0. For 043.0, the visit will also be set to 2.0 VST, and the user will not be able to modify it.
ID3	Depends	This field is disabled for all protocols except 043.0. It allows up to 12 characters, and should be scanned from the blood ID number.
Visit	Required	Defaults to the visit unit of VST. Interim, unscheduled visits should be entered by incrementing the visit value (e.g. 1.10 for the first unscheduled visit, 1.20 for the second, etc). If the protocol is 043.0, the visit will also be set to 2.0 VST, and the user will not be able to modify it.
OPID	Disabled	--
Clinic	Disabled	--
Specimen Time	Required	--
Received Time	Optional	You will be warned if received time is blank

Notes

- There are several HPTN label formats available.
- Primary and aliquot volumes with default to ML.
- Quick Add templates are not permitted for HPTN.

IPREX

The IPREX preset project has these requirements.

Data entry requirements

Field	Required?	Note
ID1 (PID)	Required	Must by 5 to 7 characters long and a valid IPREX PID; NOPID is a valid PID, unless the SID is NOSID.
ID2 (Protocol)	Required	--
ID3 (SID)	Required	Must be 11 characters long, with the first 2 digits being the clinic and the last five being the screening number in the range 80001-99999
Visit	Required	--
OPID	Optional	--
Clinic	Required	Must be 3 characters long in the format I[86 to 97] (such as I92)
Draw Time	Optional	--
Received Time	Optional	--

Notes

- IPREX using the LDMS Shipping File format.
- When entering sero-conversion visits, use the visit unit SC. The visit value should be the same as the originally scheduled visit.
- When entering sero-positive visits, use the visit unit SP. The visit value should be the number of weeks after the seroconversion visit.

IQA

The IQA preset project has these requirements.

Data entry requirements

Field	Required?	Note
ID1 (PID)	Required	--
ID2 (ID2)	Optional	--
ID3 (ID3)	Optional	--
Visit	Optional	--
OPID	Optional	--
Clinic	Optional	--

Field	Required?	Note
Draw Time	Optional	--
Received Time	Optional	--

IRC

The IRC preset project has these requirements

Data entry requirements

Field	Required?	Note
ID1 (PID)	Required	--
ID2 (Protocol)	Required	--
ID3 (SID)	Required	--
Visit	Required	--
OPID	Optional	--
Clinic	Required	--
Draw Time	Required	Only required if the draw date is after 01-Jan-2004
Received Time	Optional	--

MACS

The MACS preset project has these requirements.

Data entry requirements

Field	Required?	Note
ID1 (MACSID)	Required	MACS Identifier
ID2 (Study)	Required	--
ID3	Optional	Previously entered ID3s will be automatically populated by LDMS for the MACSID and study combination
Visit	Optional	Select from pre-defined list of visit units.
OPID	Optional	--

Field	Required?	Note
Clinic	Optional	Previously entered clinics will be automatically populated by LDMS for the MACSID and study combination
Specimen Time	Optional	--
Received Time	Optional	--

Notes

- Quick Add templates are permitted for MACS.
- When sending shipments to the MACS repository, the SeraCare shipping file format should be used.

MAVRC

The MAVRC preset project must meet these requirements.

Data entry requirements

Field	Required?	Note
ID1 (PID)	Required	--
ID2 (Protocol)	Optional	--
ID3 (ID3)	Optional	--
Visit	Optional	--
OPID	Optional	--
Clinic	Optional	--
Draw Time	Optional	--
Received Time	Optional	--

MTCT

The MTCT preset project has these requirements

Data entry requirements

Field	Required?	Note
ID1 (PID)	Required	--
ID2 (Protocol)	Optional	--

Field	Required?	Note
ID3 (ID3)	Optional	--
Visit	Optional	--
OPID	Optional	--
Clinic	Optional	--
Draw Time	Optional	--
Received Time	Optional	--

MTN

The MTN preset project has these requirements.

Data entry requirements

Field	Required?	Note
ID1 (PID)	Required	9 characters long
ID2 (Protocol)	Required	Select from a pre-populated list
ID3	Disabled	Not used for MTN
Visit	Required	Visit unit defaults to VST, but this can be overridden
OPID	Disabled	Not used for MTN
Clinic	Disabled	Not used for MTN
Specimen Time	Optional	This field is not required, but recommended
Received Time	Optional	This field is not required, but recommended

Notes

- Primary and aliquot volume will default to ML for MTN specimens.
- There are two label options available for MTN, one with a barcode and one without.
- Quick Add templates are permitted for MTN.

NICHD-Westat

The NICHD-Westat has the same requirements the ACTG/IMPAACT project.

PHACS

The PHACS preset project has these requirements

Data entry requirements

Field	Required?	Note
ID1 (PID)	Required	8 characters long, 7 numbers with a letter at the end
ID2 (Protocol)	Required	Select from a pre-populated list; all protocols are in the format PHXXX (e.g. PH200).
ID3	N/A	Not used by PHACS
Visit	Required	Select from pre-defined list of visit units.
OPID	Optional	--
Clinic	Required	Will automatically populate using the previous clinic for the group, PID, and protocol combination entered; PHACS clinics range between 1 and 24. LDMS will check that a valid clinic was selected.
Specimen Time	Optional	This field is optional, but recommended
Received Time	Optional	This field is optional, but recommended

Notes

- PHACS uses the standard LDMS shipping file format.
- There are two label options for PHACS specimens, one with a barcode and one without.
- Quick Add templates can be applied for PHACS, but users are not permitted to create their own templates. All PHACS templates are created by Frontier Science in collaboration with PHACS leadership.

REPRIEVE

The REPRIEVE preset project has the same requirements as the ACTG/IMPACCT project.

SHIMS

The SHIMS preset project must meet these requirements.

Data entry requirements

Field	Required?	Note
ID1 (PID)	Required	Nine characters long that meets the SHIMS ID1 requirements
ID2 (Study)	Required	--
ID3 (Rapid Test)	Required	--
Visit	Required	--
OPID	Optional	--
Clinic	Optional	--
Draw Time	Required	--
Received Time	Required	--

SHIMS ID1 format

RAAAhhcpp

R	1 to 4
AAA	001 to 599
hh	01 to 26
c	Check digit
pp	01 to 99

SNRP

The SNRP preset project has these requirements

Data entry requirements

Field	Required?	Note
ID1 (PID)	Required	--
ID2 (Study)	Optional	--
ID3 (SID)	Optional	--
Visit	Optional	--
OPID	Optional	--
Clinic	Optional	--
Draw Time	Optional	--

Field	Required?	Note
Received Time	Optional	--

VQA

The VQA preset project has these requirements.

Data entry requirements

Field	Required?	Note
ID1 (PanelID)	Required	LDMS will determine if this field is valid. Specimens entered or received in a shipping file prior to 01-July-2007 will not be validated.
ID2	N/A	This field is not used by VQA
ID3	N/A	This field is not used by VQA
Visit	N/A	This field is not used by VQA
OPID	N/A	This field is not used by VQA
Clinic	N/A	This field is not used by VQA
Specimen Time	N/A	This field is not used by VQA
Received Time	N/A	This field is not used by VQA

PanelID format

[Assay_Category][Panel_Number][Panel_Subtype] . [Num]Panel_Configuration

Assay_Category RNA, DNA, or CUL

Panel_Number A number between 000 and 999

Panel_Subtype

UM	Ultrasensitive RNA
SM	Standard RNA
RT	DNA proficiency panel
PQ	DNA pre-qualification panel
CC	Culture panel

Num A number between 01 and 99

Panel_Configuration A, B, or C

VTN

The VTN preset project has these requirements.

Data entry requirements

Field	Required?	Note
ID1 (PID)	Required	LDMS checks that the PID is valid. A PID cannot be changed without approval from VTN Laboratory Leadership
ID2 (Protocol)	Required	LDMS checks that the PID and protocol combination are valid.
ID3	Disabled	--
Visit	Required	Use VST for routine HIV diagnostic visits, otherwise use the appropriate visit unit. This visit unit is used by certain laboratories for driving testing algorithms.
OPID	Disabled	--
Clinic	Required	The clinic is automatically populated based on the PID; the same clinical location can be associated with multiple clinic IDs (e.g. for Phase I/II or Phase II/III). VTN clinics start with the letter V (such as V101 instead of 101). LDMS will verify that a VTN clinic was selected.
Specimen Time	Optional (but required by VTN)	While completion of this field is optional in LDMS, VTN requires laboratories to complete it.
Received Time	Required	--

Notes

- Throughout LDMS, HVTN is listed as VTN.
- The volume for VTN specimens will default to ML.
- Within VTN, LDMS Shipping files are sometimes called “e-manifests”.
- Barcodes must be printed on labels for VTN specimens.
- Quick Add templates are not permitted for VTN specimens.

WHIN

The WHIN preset project must meet these requirements.

Data entry requirements

Field	Required?	Note
ID1 (ParticipantID)	Required	--
ID2 (Protocol)	Optional	--
ID3 (ID3)	Optional	--
Visit	Optional	--
OPID	Optional	--
Clinic	Optional	--
Draw Time	Optional	--
Received Time	Optional	--

WIHS

The WIHS preset project has these requirements.

Data entry requirements

Field	Required?	Note
ID1 (PID)	Required	Must meet WIHS PID format requirements
ID2 (Protocol)	Required	Select from pre-populated list
ID3 (SID)	Optional	--
Visit	Required	The visit unit will default to VST, and the visit number will be automatically populated based on an algorithm that uses the current date
OPID	Optional	--
Clinic	Optional	--
Specimen Time	Optional	--
Received Time	Optional	--

WIHS PID format

[Site_Number][Recruitment_Number][Participant_Number][Check_Digit]

Site_Number

1	NYC (Bronx)
2	Brooklyn

3	Washington, D.C.
4	Los Angeles
5	San Francisco
6	Chicago

Recruitment_Number

2B	New recruit
0B	Original recruit
1B	Original recruit

Check_Digit Any character; an algorithm will determine if the character is valid based on the read of the PID.

Notes

- The SeraCare shipping file formatshould be used when shipping specimen to the MACS repository.
- Quick Add templates are permitted for WIHS, and users are expected to create and use template for WIHS data entry.
- Draw Date and Received Date will automatically be set to your local date.

WITS

The WITS preset project has these requirements

Data entry requirements

Field	Required?	Note
ID1 (PID)	Required	--
ID2 (ID2)	Optional	--
ID3 (ID3)	Optional	--
Visit	Optional	--
OPID	Optional	--
Clinic	Optional	--
Draw Time	Optional	--
Received Time	Optional	--

WITSRepos

The WITSRepos preset project must meet these requirements.

Data entry requirements

Field	Required?	Note
ID1 (Subject ID)	Required	--
ID2 (Study ID)	Optional	--
ID3	Optional	--
Visit	Optional	--
OPID	Optional	--
Clinic	Optional	--
Draw Time	Optional	--
Received Time	Optional	--

ZEBS

The ZEBS preset project has these requirements

Data entry requirements

Field	Required?	Note
ID1 (STUDYID)	Required	--
ID2 (ID2)	Optional	--
ID3 (ID3)	Optional	--
Visit	Optional	--
OPID	Optional	--
Clinic	Optional	--
Draw Time	Optional	--
Received Time	Optional	--

Codes, units, and abbreviations

Codes, units, and abbreviations

This section lists the codes, units and abbreviations that are used in LDMS for various entry fields, such as visits and specimen types. These codes are used by both LDMS for the web and LDMS for Windows.

Specimen type codes

Primary codes

This section lists all of the available primary codes in LDMS

Code	Description
AMN	Amniotic Fluid
ANL	Anal
APP	Air Pollution Particles
ARB	Rectal Biopsy by Anoscopy
ARL	Breast Areola
ART	Arterial Blood Draw
BAL	Bronchoalveolar Lavage
BHR	Hair, Body
BLD	Blood (Whole)
BMA	Bone Marrow Aspirate
BMC	Bone Marrow Core Biopsy
BMK	Breast Milk
BML	Breast Milk - Left
BMR	Breast Milk - Right
BRB	Bronchoscopy Brush
BRN	Brain Tissue
BRS	Breast Tissue
BUC	Buccal
CER	Cervix
CRD	Cord Blood
CSC	Cervical Secretion
CSF	Cerebro-Spinal Fluid
CVB	Cervical Biopsy/Aspirate
CVF	Cervicovaginal Fluid
CVL	Cervical Vaginal Lavage
CXC	Cervical Culturette

Code	Description
CXS	Cervical Swab
DIA	Dialysate
DPL	Dried Plasma
DTC	Distal colon
DWB	Dried Whole Blood
EBC	Exhaled Breath Condensate
END	Endometrium
EPS	Expressed Prostatic Secretions
EYE	Corneal Tissue
FHR	Hair, Facial
FSC	Sigmoid Colon Biopsy by Flexible Sigmoidoscopy
FSI	Penis Foreskin, Inner Tissue
FSK	Penis Foreskin, Whole Tissue
FSO	Penis Foreskin, Outer Tissue
FSR	Rectal Biopsy by Flexible Sigmoidoscopy
FST	Blood from Fingerstick
GAS	Gastric Secretions
GCF	Gingival Crevicular Fluid
GLN	Glans
GLU	Genital Lesion/Ulcer
GMI	Gastro Intestinal Mucosa
HAR	Hair
HRT	Heart
HST	Blood from Heelstick
INT	Intestinal Biopsy/Aspirate
INW	Induction Waste
IVR	Intra-vaginal Ring
KID	Kidney Biopsy
LBT	Lateral Border of the Tongue
LIV	Liver Tissue
LPK	Leukopak
LUE	Lung, Excised
LUF	Lung, Filter Paper
LYM	Lymph Node Biopsy/Aspirate
MEC	Meconium
MSB	Main Stem Bronchus Wash
NAS	Nasal
NPH	Nasopharyngeal
NPW	Nasopharyngeal Wash
NRH	Naso-oropharyngeal

Code	Description
NSB	Nasal brush
OPW	Oropharyngeal Wash
ORH	Oropharyngeal
ORL	Oral
OTH	Other
PAN	Perianal
PEN	Penis
PFL	Pleural Fluid
PHR	Hair, Pubic
PHX	Pharynx
PLC	Placental Tissue
PLQ	Plaque
PRT	Prostate Tissue Biopsy
REC	Rectal
RSC	Rectosigmoid Colon
SAL	Saliva
SCR	Scrotum
SEM	Semen
SHR	Hair, Scalp
SIN	Sputum, Induced Non-Select
SIS	Sputum, Induced Select
SKN	Skin
SLU	Skin Lesion
SPI	Sputum, Induced
SPL	Spleen
SPS	Sputum, Spontaneous
SPT	Sputum
SSN	Sputum, Spontaneous Non-Select
SSS	Sputum, Spontaneous Select
STL	Stool
TBD	Specimen type to be defined
TCA	Tracheal Aspirate
TER	Tears
THR	Throat Swab
THW	Throat Wash
THY	Thymus
TIL	Terminal Ileum
TON	Tonsillar Biopsy/Aspirate
TVC	Transverse Colon
UNK	Unknown Primary

Code	Description
URN	Urine
UTH	Urethra
VAG	Vaginal Swab
VCS	Cervicovaginal Secretions
VGL	Vaginal
VSC	Vaginal Secretions
VUL	Vulva
WAR	Warts

Additive codes

This section lists all of the additive codes available in LDMS.

Code	Description
ACD	Acid Citrate Dextrose
AG1	ESAT 6-free cocktail 1
AG2	ESAT 6-free Cherry pick
AHP	Ammonium Heparin
BBL	CultureSwab Kit
BFM	Bacterial Freezing Media
BOR	Boric Acid
BTM	Biopsy Transport Media
CPD	Citrate Phosphate Dextrose
CPH	Cell Preparation Tube Heparin
CPS	Cell Preparation Tube SCI
CTK	Culture Transport Kit
DFA	Desferoxamine
DHP	Double dosage of Heparin
DPE	Spray Dried Potassium EDTA
DSE	Spray Dried Sodium EDTA
EDT	EDTA
END	Endometrial Tissue
ETH	Ethanol
FFN	Fetal Fibronectin Buffer
FMD	Formaldehyde
FOR	Formalin
GEN	GenAptima Media
GIT	Guanidine Isothiocyanate (GITC)
GLT	Glutaraldehyde
GRB	Guanidine Reduction Buffer
H2O	Water
HEP	Heparin

Code	Description
ISO	Isohelix kit
IST	Internal Standard
LHG	Lithium Heparin and Gel for Plasma
LHP	Lithium Heparin
LPE	Liquid Potassium EDTA
LSE	Liquid Sodium EDTA
LYB	Lysis Buffer
MBK	Microbank tube
MPA	Metaphosphoric Acid
NOH	Sodium Hydroxide
NON	None
NOR	Normasol
NSL	Normal Saline
OCT	Optimum Cutting Temperature Medium
ORA	OraSure Collection Container
ORG	Oragene Collection Container
OTH	Other
PAC	Port-a-cul Transport Tube
PAX	PAXgene Blood RNA tube
PBS	Phosphate Buffered Saline
PED	Potassium EDTA
PFM	Paraformaldahyde
PI1	S8820 Sigma SIGMAFAST? Protease Inhibitor Tablets
PLP	PLP Fixative
PPT	Plasma Preparation Tube
PRO	ProbeTec Media
QAG	QFT-TB Ag Red Cap)
QTF	QuantiFERON-TB Gold Assay
QMT	QFT-Mitogen Purple Cap
QNL	QTF-Nil Grey Cap)
RBE	Royal blue - EDTA
RBN	Royal blue - no anticoagulant
RLS	Ringer’s Lactate Solution
RNL	RNALater
RNP	RNAprotect
ROC	Roche Media
RPM	RPMI 1640 Medium
SCC	Steck Cyto-Chex tubes - stabilized
SCI	Sodium Citrate
SED	Sodium EDTA

Code	Description
SFL	Sodium Fluoride
SKM	Skim Milk
SNP	Snap/Flash Frozen
SPH	Sucrose Phosphate
SPO	Sodium Fluoride/Potassium Oxalate
SPS	Sodium Polyanetholesulfonate
SST	Serum Separator
STG	Skim milk-Tryptone-Glucose-Glycerin Medium (STGG)
TBD	Specimen type to be defined
TBS	Tris-buffered saline
TEM	Tempus Tube
TFM	Tissue Freezing Medium
THM	Thrombin
TMS	Transport Medium-Stuarts
UNK	Unknown Additive
VTM	Viral Transport Media

Derivative codes

This section lists the derivative codes available in LDMS.

Code	Description
AD4	Activated CD4
ADL	Adipose Tissue Layer
AG1	ESAT 6-free cocktail 1
AG2	ESAT 6-free Cherry pick
AMN	Amniotic Fluid
APL	Applicator Tip
ASP	Aspirate
BAL	Bronchoalveolar Lavage
BCL	B-cell Lymphoblastoid Cell Line
BHR	Hair, Body
BLD	Blood (Whole)
BLK	Tissue Block
BMA	Bone Marrow Aspirate
BMC	Bone Marrow Core Biopsy
BMK	Breast Milk
BML	Breast Milk - Left
BMR	Breast Milk - Right
BMS	Breast Milk - Spun
BMW	Breast Milk - Whole
BPS	Biopsy

Code	Description
BRN	Brain Tissue
BRS	Breast Tissue
BUC	Buccal
BUF	Unficolled Cryopreserved Buffy Coat, Viable
CAN	Candida
CCC	Cryopreserved Cells from a Culture, Viable
CD4	CD4 Positive T-Cells
CD8	CD8 cells
CDN	Copy DNA
CDP	Dry Pellet from a Culture, Non Viable
CEL	PBMC Cells, Viable
CEN	Fresh Cells from a Non-Blood Spec. Type
CGN	Cells in GITC
CIO	Cells in Other (Solution), Non-Viable
CLI	Cell Lines
CLN	Cryopreserved primary cells from Non-Blood Spec Type, Viable
CMV	CytoMegaloVirus Isolate
CRY	Generic Cryptococcus
CSF	Cerebro-Spinal Fluid
CSR	Serum - Chilled
CTB	Cytobrush
CTC	Cells from a CTL Assay
CTS	Supernatant generated from a CTL Assay
CVL	Cervical Vaginal Lavage
CVS	CVL Supernatant
CXS	Cervical Swab
DBE	Dried Blood Extract
DBS	Dried Blood Spot
DPE	Spray Dried EDTA
DPL	Plasma, Dried
DPS	Dried Plasma Spot
DSP	Digested Sputum
DUR	Dried Urine
DWB	Dried Whole Blood
ED4	Effector Memory CD4 T-cells
END	Endometrial Tissue
EPP	Endodontic Paper Point
FHR	Hair, Facial
FLD	Fluid Portion from a Non-Blood Specimen Type
FPL	Plasma, Filtered

Code	Description
FSI	Penis Foreskin, Inner Tissue
FSO	Penis Foreskin, Outer Tissue
GMI	Gastro Intestinal Mucosa
HAR	Hair
HRT	Heart
ICK	Supernatant generated from Inducible Cytokines
IPK	Methanol Extract Supernatant
IVR	Intra vaginal Ring
LAV	Lavage
LIV	Liver Tissue
LPD	Lipid Layer
LPK	Leukopak
LYM	Lymph Node Biopsy/Aspirate
LYS	Lysed whole blood
MCL	Macrophage Cells - Viable
MCS	Microbiology Culture Slant
MD4	Central Memory CD4 T-cells
MDC	Myeloid Dendritic Cells
MEC	Meconium
MPE	Macrophage Dried Cell Pellet, Non Viable
MTB	MTB Isolates
MUC	Mucins
N/A	Not Applicable - Same as Primary Specimen Type
NCL	Neutrophil (PMN) - Viable cells
ND4	Naive CD4 T-cells
NKC	Natural Killer Cells
NON	None
NPE	Neutrophil (PMN) Dried Cell Pellet, Non Viable
NPW	Nasopharyngeal Wash
NTM	Nontuberculous mycobacteria
NXD	Non-extracted DNA
OPC	Ova and Parasite Concentrate
OTH	Other
PCC	Culture Supernatant and Cells
PDC	Plasmacytoid Dendritic Cells
PED	Dried Pellet - Digene
PEL	Non-viable PBMC s
PEN	Non-viable cells from non-blood specimen type
PEO	Wet Pellet Prep - Organon Teknika
PER	Dried Pellet - Roche

Code	Description
PHR	Hair, Pubic
PL	Plasma, All
PL1	Plasma, Single-Spun
PL2	Plasma, Double-Spun
PLA	Plasma, Unknown Processing
PLC	Placental Tissue
PLH	Plasma High Spin
PLM	Placenta - Membrane Slice
PLP	Supernatant and Cells from a Quantitative Culture
PLT	Placenta - Placenta Slice
PPS	Periopaper Strip
QAG	QFT-TB Ag Red Cap)
QMT	QFT-Mitogen Purple Cap
QNL	QTF-Nil Grey Cap)
RBC	Red Blood Cells
REC	Rectal
RD4	Resting CD4 T-cells
SAL	Saliva
SDI	Supernatant Dermis, Inner
SDO	Supernatant Dermis, Outer
SEC	Secretions
SEI	Supernatant Epidermis, Inner
SEM	Semen
SEO	Supernatant Epidermis, Outer
SER	Serum
SHR	Hair, Scalp
SKN	Skin
SLD	Slide from a primary sample
SMR	Smear
SNO	SNO - Strip
SPG	Sponge
SPI	Unfractioned Sputum, Induced
SPQ	Supernatant from a Quantitative Culture
SPT	Unfractioned Sputum
SRH	Serum - High Speed Spun
STK	Quantitative Culture Held beyond 14 Days
STL	Stool
SUP	Culture Supernatant
SWB	Swab
TBD	Specimen type to be defined

Code	Description
TD4	Resting CD4 T-cells
TFS	Tear-Flo Strips
THW	Throat Wash
THY	Thymus
TIS	Tissue
TON	Tonsillar Biopsy/Aspirate
TRC	Trucount
UMB	Placenta - Cord Slice
UNK	Unknown Derivative
URN	Urine
VAG	Vaginal
VCP	Vaginal cup
VTM	Viral Transport Media
W	D Wet/Dry
WBP	Whole Blood Pellet, Specify Methodology
WEK	Wick/Wek Cell Sponge
WFC	Unstimulated whole blood cell, lysed , fixed, frozen (with DMSO) for flow
WFS	Stimulated whole blood cells, lysed, fixed, frozen (with DMSO) for flow
WPK	Whole Blood Packed
XDA	Extracted DNA
XFL	Extracted Fluid from RNA RT PCR for Sequencing
XPA	Extracted RNA
XPD	Extracted Pellet from DNA PCR for Sequencing
XPR	Extracted Pellet from RNA RT PCR for Sequencing
XTN	Extracted total nucleic acid

Sub additive/derivative codes

This section lists the sub additive/derivative codes available in LDMS.

Code	Description
562	K562 Cell Line
ADA	Adenosine Deaminase
AEB	Qiagen AE Buffer
AFS	Alsever's Freezing Solution
APR	Aprotinin
ASC	Ascorbate (Vit C)
ATC	Animal Tumor Cell Line
ATG	TB Antigen
Atorvast-2OH	2-hydroxy Atorvastatin
Atorvast-4OH	4-hydroxy Atorvastatin
Atorvast-LAC	Atorvastatin Lactone

Code	Description
Atorvast-LAC2OH	2-hydroxy Atorvastatin Lactone
Atorvast-LAC4OH	4-hydroxy Atorvastatin Lactone
AUO	Auramine O
AVE	en Buffer AVE
BCG	Bacille Calmette-Guérin
BCL	B-cell Lymphoblastoid Cell Line
BFM	Bacterial freezing media
BHT	lated hydroxytoluene
BML	Breast - Left
BMR	Breast - Right
BTM	Biopsy Transfer Media
CAN	Candida (CASTA)
CCM	CareHPV Collection Medium
CD4	CD4 cells
CD8	CD8 cells
CDN	cDNA
CME	Culture Media
CMV	CytoMegaloVirus
CON	Control
CSP	Cytospin Slides
CSC	Cervical secretions
CUP	CUP
CYT	Cytokines
DCF	2 - deoxycoformycin.
DEA	DEACTIVATED
DMS	Dimethylsulfoxide (DMSO used in cryopreservation solution [CPS])
DPH	Wyeth Ayerst Diphtheria Antigen
DPL	Depleted Cell Populations
DTM	Digene/Qiagen Specimen Transport Medium
DTT	Dithiothreitol
EDT	EDTA
ETH	Ethanol
FBS	Fetal Bovine Serum
FMD	Formaldehyde
FOR	Formalin
FPR	Filter Paper
FRS	First Spin
FUN	Fungal Broth
GAG	HIV GAG envelope peptide

Code	Description
GIT	Guanidine Isothiocyanate (GITC)
GLM	Glycerol Media
GLT	Glutaraldehyde
GLY	20% Glycerol
GMS	Giemsa Staining
GRS	Gram Stain
H	E hematoxylin and eosin stain
H2O	Water
HBS	Hank's Balanced Salt Solution
HCl	Hydrochloric Acid
HPA	Hep A
HTC	Human Tumor Cell Line
I18	IL-18
I1b	IL-1b
IAP	Iodoacetic Acid/Phenanthrolene
IL2	IL-2, Interleukin 2
IL6	Interleukin6
ILA	IL-12/IL-15, Interleukin-12/Interleukin-15
INK	India Ink
IgG	Immunoglobulin G
LES	Lesion
LFT	Left
LPS	Lipopolysaccaride
LVT	L-var Target
LYB	Lysis Buffer
M2V	M2V
MA1	MAC 101
MAC	MAC Antigen
MAF	MAC LR114F Culture Filtrate
MAS	M. Avium Sensitin
MDB	Middlebrook broth
MET	Methanol
MFS	Malaria Freezing Solution
MIF	Merthoilate Formalin/Merthiolate-Iodine Formalin (MF/MIF)
MIT	Mitogen Control
MRN	Messenger RNA
MT2	MT2 Cell Line
MUC	Mucins
N/A	Not Applicable
NCL	N-acetyl-L-cysteine

Code	Description
NDN	NDVNS1, Newcastle disease virus with NS1 influenza protein
NDV	NDVB1, Newcastle disease virus wild type
NDW	Newcastle disease virus with W influenza protein
NIL	Negative Control
NKC	Natural Killer cells
NOH	Sodium Hydroxide
NON	None
NPI	Neuropepsidase Inhibitor
NSL	Normal Saline
NUC	Nucleotides
OCT	Optimum Cutting Temperature Medium
OKT	OKT3 Treated
OTH	Other
P24	P24
PAR	Parrafin
PBS	Phosphate Buffered Saline
PCS	PreserveCytSolution
PEI	Pre-Infusion
PFM	Paraformaldahyde
PHA	PHA-Treated
PI1	S8820 Sigma SIGMAFAST Protease Inhibitor Tablets
PLD	Plasma, Depleted
PMI	Phorbol Myristate Acetate-Ionomycin
PPA	Phosphoric Acid
PQ	Piperaquine
PRS	Protamine Sulfate
PTI	Post-infusion
PTK	Proteinase-K
PVA	Polyvinyl alcohol
PWM	Pokeweed Mitogen
RFW	RNAse free water
RGT	Right
RNL	RNAlater
RNP	RNA Protect
RPM	RPMI 1640 Medium
RTB	Reverse Transcriptase buffer
S52	Sendai 52 virus with defective infectious particules
SCB	Sodium Carbonate
SDS	Second Spin
SEB	Sigma Staphylococcus Enterotoxin B

Code	Description
SNP	Snap/Flash Freeze
STG	Skim milk-Tryptone-Glucose-Glycerin Medium (STGG)
STM	Stimulated by Multiple Antigens
SUP	Cultural Supernatant
TBD	Specimen type to be defined
TBS	Tris-buffered saline
TCA	1% Thimersol/ 6.6% EACA (Epsilon Amino Caproic Acid)
TCL	T-cell Lymphoblastoid Cell Line
TCM	Trichrome stain
TEM	Tempus Tube
TFM	Tissue Freezing Medium
TMD	Myeloid dendritic cell non infected and treated with TSST
TMS	Transport Medium-Stuarts
TND	Myeloid dendritic cell infected with NDVW and treated with TSST
TNN	TSST with NDVNS1
TNV	TSST with NDVB1
TOC	Tocopherol (Vit E)
TRI	TriReagent
TRX	Triton X
TRZ	Trizol
TSC	Myeloid dendritic cell infect w/ Sendai Cantell and treat w/ TSST
TSS	TSST, Toxic-Shock Syndrome Toxin
TTX	Tetanus Toxoid treated
UCT	Urine cartridge
UNK	Unknown Sub A/D
UNT	Untreated / Unstimulated
VCS	Cervicovaginal secretions
VIB	Veal Infusion Broth
VIR	Virus
VPS	VP Stimulator
VPT	VP Target
VTM	Viral Transport Media
ZLN	Ziehl Neelsen

Condition codes

This section lists the specimen condition codes available in LDMS.

Code	Description
ANM	Sample Anonymized
ANP	Aliquot not prepared

Code	Description
BKV	Broken or cracked vial
CDT	Consumed During Testing
CLT	Clotted
COC	Combination of Conditions (Explain)
CTM	Contaminated
DIM	Dry Ice Melted
DMG	Damaged container
DSH	Delayed Shipment
DSR	Destroyed
EQF	Equipment Failure
EXP	Expired
FRO	Frozen
HEM	Hemolyzed
HUM	Exposed to high humidity
ICT	Icteric (Excess Bilirubin)
INT	Incorrect Tube
INV	Invalid Specimen
LBE	Lab Error
LIP	Lipemic
LKD	Leaked
LSH	Lost Shipment
LYS	Lysed
NQA	Real-time QA for viability and viable recovery not performed due to low volume of specimen collected
OPR	Sample drawn outside protocol requirements
OSW	Specimen drawn outside of protocol-defined visit window
OTH	Other (Explain)
PST	Processed after Specified Time
QNS	Quantity Not Sufficient
REF	Refrigerated
SAT	Satisfactory
SHV	Short volume
SNC	Sample not collected
SNP	Specimen not processed
SNR	Sample Not Received,CRF Received
TNO	Shipping/storage temperature not optimal/warmed
TWD	Thawed
UNK	Unknown condition
VRU	Viable recovery may be outside expected parameters (higher or lower)
VPL	Viability percent may be less than the expected parameter

Unit codes

Measurement codes

This section lists the measurement codes available for specimen units available in LDMS.

Code	Description
CEL	Cells
CM	Centimeters
CRD	Cards
CTN	Container
EA	Each
GR	Grams
MG	Milligrams
ML	Milliliters
MM	Millimeter
N/A	Not Applicable
PG	Picograms
UG	Micrograms
UL	Microliters
UNK	Unknown Units

Time unit codes

This section lists the time unit codes available in LDMS.

Code	Description
Day	Day
Fst	Fasting
Hrs	Hours
Min	Minutes
Nft	Non-Fasting
Pol	Pooled
Prd	Predialyzer
Pre	Pre-Dose
Psd	Postdialyzer
Pst	Post-Fasting
Ran	Random
RPD	Random Post Dose
Sec	Seconds
Tr	Trough
UNK	Unknown time unit

Visit codes

This section lists the visit unit codes available in LDMS.

Code	Description
A	A
Aut	Autopsy
B	B
B/L	Baseline
Bth	Birth
Cb	Cord Blood
CFM	Post Study Confirmation Test
Ch	Challenge
Day	Days
EDV	Event Driven Visit
Ent	Entry/Baseline
EOR	End of Study and redraw
Eos	End-Of-Study
EOX	End of Study and possible recent exposure
EPH	Extension Phase
Exp	Recent Exposure
Ext	Exit/Discontinuation
FCF	Failure Confirmation
FUP	Follow-up Test
Gel	On study without gel
Inf	Infected Participant Testing
L	D Labor and Delivery
Mo	Months
OFP	Off PrEP
ONP	On PrEP
PDT	Product Discontinuation
PE	Pre-entry
POR	Post study and redraw
Pos	Post-Study
POX	Post study and possible recent exposure
PPt	Post Partum
Prf	Proficiency
Pri	Pre-Infusion
Pst	Post-Infusion
Qul	Qualification
Rdw	Redraw
RRV	Retrospective
RRV	Retrospective

Code	Description
RWK	R+ Week
SC	Seroconversion
SCK	Sick
Scr	Screening
SD	Study Day
SP	Sero Positive
Sps	Special Studies
SRV	Post Study Service Test
UnK	Unknown
Uns	Unscheduled
Vst	Visit
Wk	Weeks
Yr	Years

Release notes

LDMS release 08-Oct-2015 (version 3.0)

These are the enhancements made to LDMS release 08-Oct-2015 (version 3.0).

New features

- R-17763 The ability to edit multiple specimens at once has been added to the Specimen Management page.
- R-22175 Added new Custom Report Builder feature to LDMS
- R-22431 The website www.webldms.org now directs to a general website about LDMS, rather than directly to the login screen.

Improvements

- R-21567 Relaxed rules for assigning, modifying, or removing storage locations to specimens that are part of a shipment.
- R-22002 Added remove button to filters to make it more apparent how they are deactivated.
- R-22443 Added remove button to filters when adding specimens to storage to make it more apparent how they are deactivated.
- R-22010 Improved LDMS's Section 508 compliance in various areas.
- R-22094 Improved LDMS's Section 508 compliance by adding more links to appropriate "plugins".

- R-22096 Improved LDMS's Section 508 compliance by adding `aria-labelledby` attributes to various fields.
- R-22020 The user can now remove cryopreservation information that was previously added.
- R-22045 Re-arranged display of information on several pages so that ID3 appears before clinic to accommodate projects where ID3 determines the clinic.
- R-22058 It is now possible for certain specimen fields (such as VTN's ID1) to be locked per project, requiring a challenge code response from user support to modify.
- R-22197 Quick Add templates can now be deactivated so that they can no longer be selected, but are still preserved for historical purposes.
- R-22368 Refactored images to increase application load time and responsiveness.
- R-22377 Added client-side validation for required comments when a specimen is made unavailable.
- R-22387 Changed the display widget on several screens to make LDMS faster.
- R-22539 Added new REPRIEVE2 label format.
- R-22551 Updated copyright statement in page footers.
- R-22597 Added *Quick Add Template List* report, which lists available Quick Add templates.
- R-23039 Added new *Database Dump 2* report.
- R-22619 Added PHIA as an available preset project.
- R-22666 When using a Quick Add template, the frozen date will now default to the received date.
- R-22742 The speed and responsiveness of the Storage page has been significantly improved.
- R-22804 Improved speed and responsiveness of the Shipping page when a laboratory has a large number of specimens.
- R-22788 It is now possible to add more than 100 containers to a storage level.
- R-23021 Increased allowable length of tech initials on shipment QA/QC from five to ten.
- R-22000 Added unit tests for un-shipping a sent shipment.
- R-22011 Added unit tests for cryopreservation features.
- R-22090 Added unit test cases for the classes that auto-populate various specimen information based on project-specific defaults.
- R-20894 Improved appearance of the `_PopUpLayout` view.
- R-21085 LDMS now uses an optimized custom Dojo build to significantly reduce the number of files that are requested when initially accessing the application.
- R-22086 Miscellaneous improvements and fixes to project-specific initializations.
- R-22286 Added `robots.txt` file.
- R-22287 Added `<meta>` to prevent Internet Explorer from requesting `browserconfig.xml`, which LDMS does not provide.

Fixes

- R-20112 Fixed issue where LDMS did not retain the storage location of specimens in shipments created using LDMS for Windows.
- R-20993 The *Shipping Container Report* will now show the correct positions of specimens, rather than sorting by position and using the container's fill order.
- R-21471 Minor miscellaneous changes to the Quick Add feature.
- R-21601 Changed "patient" to "participant" throughout the user interface and reports.
- R-22463 Changed "draw" to "collection" (i.e. collection date and time) throughout the user interface and reports.
- R-22683 Changed "draw" to "collection" (i.e. collection date and time) and "group" to "project" on several reports.
- R-22254 Changed "group" to "project " on several reports.
- R-21773 When a shipment disclaimer is specified, it will now appear in all places that it is expected.
- R-21859 Specimens with multi-line comments will no longer cause layout issues on the QA/QC page.
- R-21880 If a project that is currently set as a filter is deleted, that filter will no longer be permanently set.
- R-21881 Fixed issue where the preview of very large shipments would not be rendered correctly when the shipment was received.
- R-21891 The *Storage Container Report* now correctly shows the specimen date for primary specimens.
- R-21984 When importing a storage unit as-is into storage, an unnecessary level will not be added to SHIPPING IMPORT FREEZER.
- R-22332 When un-shipping a storage unit, unnecessary levels are no longer added to the UNSHIPPED FREEZER.
- R-21989 Added restrictions to the SHIPPING IMPORT FREEZER to prevent unexpected uses of this storage unit.
- R-21994 Fixed issue where shipping reports could not be generated for a pending shipment until the shipment window was saved, closed, and re-opened.
- R-22025 Updated shipping validation logic so that additional time and additional unit must both be set or both be empty.
- R-22089 Fixed issue where duplicate specimen validation errors could be displayed for the same data entry issue.
- R-22093 Collection date is now marked as a required field when modifying a primary specimen.
- R-22103 Fixed field alignment on the log in page.
- R-22141 Fixed issue where filter criteria warnings persisted even after the condition that caused the warning as been corrected.

- R-22145 After generating a validation error when adding a specimen using the Quick Add feature, the Quick Add template will now remain selected as expected.
- R-22146 When a validation error is generated using the Quick Add feature, duplicative error messages for the same issue will no longer be generated.
- R-22787 After generating a validation error when trying to save a specimen using the Quick Add feature, certain fields will no longer be made blank.
- R-22376 When applying a Quick Add template, validation errors that were present before the template was applied will now be cleared.
- R-22148 Fixed issue where the filter criteria on the Reports page could be activated before the desired report was selected.
- R-22152 When assigning storage locations to specimens, selecting and adding specimens will move then from the Available Specimens list to the Selected Specimens list.
- R-22153 A SHIMS ID3 will now appear correctly on the Manage Enrollments screen.
- R-22207 VQA ID1 will now be validated when using the Quick Add feature.
- R-22247 Removed ability to move specimens from a container that is part of a pending shipment to another container that is part of another pending shipment.
- R-22289 Fixed error triggered by adding a date filter without selecting a date.
- R-22305 Quick Add template filters will now only show filters used by existing Quick Add templates.
- R-22363 Specimens that are moved within a container will now appear on the *Move Report*.
- R-22415 An appropriate error message will now appear when an incorrect challenge response code is provided.
- R-22553 On the Storage page, unknown specimen types will no longer generate an error due to a missing icon.
- R-22577 Fixed issue where pre-defined lists and values were erroneously available for VQA specimens.
- R-22580 It is now possible to generate aliquot labels using Internet Explorer 9.
- R-22857 Fixed issue where a specimen that was part of a pending shipment could be assigned a storage location in a container that was part of a different pending shipment (i.e. it was on 2 shipments at once).
- R-22890 Fixed logic for handing moving storage items into other storage items that are part of pending shipments.
- R-22912 Text of laser label 6 will no longer be cut off.
- R-22918 It is now possible to un-ship shipments that contain storage levels.
- R-22933 Filters will now autopopulate correctly when there are more than 100 possible options.
- R-23221 Received time is now correctly a required field for HPTN
- R-23190 Fixed issue with the Import Shipment Container Sample Position patch, which failed with a divide by zero error on laboratory 573's database.

- R-21943 Djini will now merge `data_dojo_props` instead of overwriting the default properties.
- R-20526 Shipping files now include `Samples.OwnerVisitId`.
- R-21612 Removed `predefinedValueId` from participants, enrollments, and visits.
- R-21944 Added `LabelDefaults.RecordOwnerLabId` as a primary key to prevent potential primary key violations.
- R-22246 When moving specimens into or out of a storage container that is part of a pending shipment, `PendingShipmentStorageSamples` will now be updated.
- R-22315 Re-factored `DojoTemplatesControlers`.

LDMS release 20-May-2015 (version 2.0)

These are the enhancements made to LDMS release 20-May-2015 (version 2.0).

New features

- R-17210 When receiving a shipping file, LDMS will now show a preview of the shipment's contents.
- R-17264 When a shipping file is received that contains storage items, LDMS can now add those storage items as-is to a storage unit at the receiving laboratory.
- R-18229 Added support for cross-LIMS shipping files.
- R-18230 Added support for shipment QA/QC, a feature that allows users to verify that the specimens that are included in a shipping file match the physical specimens in the real-world shipment.
- R-18231 After a shipping file has been generated and all of the specimens changed to sent, a shipment can now be un-sent, returning it and its specimens back to their previous state.
- R-18232 After a shipping file has been received and loaded by a laboratory, it can now be un-received, removing all of the specimens from the shipment from the laboratory.
- R-18443 It is now possible to specify logic for selecting data when generating reports on the Reports page.
- R-20049 It is now possible to generate a report showing where specimens have moved in storage.
- R-20162 Added support for numerous preset projects. Requirements and validations for these projects are determine by individual projects working with Frontier Science
- R-20200 Added support for the SeraCare shipping file format (for sending shipments only).
- R-20391 Added the ability to enter cryopreservation information for specimens.

Improvements

- R-17879 Improved the readability of specimen information on the Specimen Management page.
- R-19056 Updated interface to more consistently use the term “specimen” instead of “sample”.
- R-19461 When selecting specimens to store or add to a shipment, it is now possible to select more than one specimen at once.
- R-19462 When a specimen is added to a pending shipment and has a storage location assigned, its icon on the Storage page will indicate that it is part of a shipment.
- R-19513 Improvements to the interface on the Labels page.
- R-19568 Reordered data entry boxes on the New Specimen page so that more commonly used items appear near the top.
- R-19968 Shipping manifests can now be generated prior to shipping a shipment.
- R-20207 Added specimen validation checks to the ACTG/IMPAACT project.
- R-19037 The user is no longer required to specify a shipping destination before saving a pending shipment (the destination is still required to send the shipment).
- R-20216 Added logic to prevent users from inadvertently creating shipping files in the LDMS format for laboratories not using LDMS, as well as a warning attempting to use a non-LDMS format to ship to a laboratory that does use LDMS.
- R-20284 When changing a specimen’s condition to DSR (destroyed), LDMS will now show the specimen’s storage location and prompt the user to enter a comment.
- R-20308 Specimen validation will now be checked for specimens on shipments when they are sent and received.
- R-20321 Lab tech initials can now be set on aliquot specimens, instead of just primary specimens.
- R-20336 When receiving a shipping file that includes specimens without a global specimen ID assigned, similar specimens will now be appropriately grouped together under a primary specimen.
- R-20498 Added link to a PDF viewer on pages where the user can download a PDF file. This was done to improve compliance with the Section 508 Amendment to the Rehabilitation Act of 1973.
- R-21640 Added alternative text to pagination buttons to improve compliance with Section 508.
- R-20660 Improved the interface of the Manage Enrollments page.
- R-20854 The *Shipping Manifest*, *Shipping Container*, and *Storage* reports are now available in additional places on the Shipping page.
- R-20855 LDMS can now import shipping files with a `.dat` extension, which is sometimes added automatically to shipping files by email clients when attaching them to messages.

- R-20208 For the preset projects added as part of R-20162, validation checks were also added.
- R-21472 Added support for Quick Add template usage rules and restrictions for preset projects added as part of R-20162.
- R-21483 Users are now prevented from changing projects once a Quick Add template has been applied. This is necessary to support using templates with preset projects.
- R-21785 Added co-enrollment usage rules for preset projects.
- R-21837 Certain primary specimen information can now be cascaded from a primary specimen to aliquots at the user's discretion.
- R-19052 Improved page loading times by allowing certain HTTP requests to be run in parallel.
- R-19005 Validation of excluded positions in containers is now performed at the server level.
- R-19622 Removed `ContainsUnavailableSamples` property from storage view models.
- R-20058 Removed support for CDC barcode.
- R-20164 When a new field is added to a table and that field has a default value, new transaction log entries will now be made for these record changes.
- R-20328 Set up an automated process for generating builds nightly and after committing code changes, as well as running test units on builds.
- R-20488 In `web.config` on development, `customErrors mode` is now set to off.
- R-21639 Added `lang='en'` to generated HTML output for Frontier Science web standards.

Fixes

- R-19217 Fixed issue where some reports would list co-enrolled specimens twice.
- R-19474 Fixed issue where specimens were not being found on the Labels page when searching on a field that was not defined for the specimen.
- R-19641 Fixed ambiguous message the appeared when removing items from storage.
- R-19892 Fixed issue where freezer temperatures did not appear in order when they could be selected from a menu.
- R-19923 Fixed issue where the Shipping Container Report did not correctly show the sort order for individual containers.
- R-19941 When generating specimen labels, LDMS will no longer create labels for unavailable specimens.
- R-19969 Fixed issue where it was not possible to add specimens to shipping containers that already contained a large number of specimens.

- R-20113 If a specimen is part of a pending shipment, LDMS will no longer allow a user to delete it without first removing it from the shipment.
- R-20123 The Storage Unit Template page now clearly shows the hierarchy of storage items contained in the storage unit.
- R-19137 When modifying a shipping container, LDMS will now correctly sort specimens using the shipments fill order.
- R-20324 Unless otherwise enforced by a project, ID3 is no longer considered a required field for specimens being sent or received in a shipment.
- R-20333 The *Specimens Not in Storage* report will now correctly show primary specimens, as well as aliquots.
- R-20337 When a specimen's condition is changed to a condition that makes it unavailable (such as DSR for destroyed), the **Available** option will be disabled for the specimen.
- R-21508 When a specimen's condition is changed to a condition that makes it available after being unavailable, the specimen will now be changed back to available.
- R-20348 Fixed issue where the positions of specimens in CSV shipping files were not calculated correctly.
- R-20486 Fixed issue where storage items holding too many items were not displayed properly in the interface.
- R-20527 Fixed issue where units (and their associated help tooltip) could not be displayed correctly if the unit contained a special character.
- R-20534 Fixed issue where clicking a specific button on the Labels page caused other information entered on the screen to reset.
- R-20569 Fixed message that appears when attempting to assign an item to an excluded storage or shipping container position so that it displays the correct number.
- R-20659 Fixed issue where co-enrolled specimens could not be assigned different clinics.
- R-20667 Fixed issue where if the user modified a specimen's draw date on the Edit Primary page, it would not automatically be refreshed on the Specimen Management page.
- R-20866 Fixed issue where certain fields were shown in the interface as required when creating a new shipment, however the fields are not actually required until the shipment is sent, not when saving a pending shipment.
- R-21300 Fixed issue where if a primary specimen is shipped to another laboratory and then shipped back to the original laboratory, any new aliquot specimens added to it would be erroneously assigned a global specimen ID that does not match the parent.
- R-21305 Fixed issue with the *Storage Detail Report* where the label for the visit column was not being displayed correctly.

- R-21562 Fixed inconsistencies with how specimens were being sorted on shipments when there was a mix of specimens using LDMS for Windows and LDMS format global specimen IDs.
- R-21564 Fixed issue where a specimen with the same global specimen ID could be received in a shipping file even if it was already in a laboratory's database.
- R-21578 Added labels to some date and time boxes on the new specimen screens that did not have labels.
- R-21593 Fixed issue where modifying the draw date for a specimen on the Quick Add screen did not update the specimen's received date as expected.
- R-21623 Fixed issue where the *Specimens Not In Storage* report did not show the full global specimen ID if it was in the LDMS format.
- R-21852 Fixed an issue where an error would prevent updating an existing visit using the Quick Add feature.
- R-19579 Fixed formatting of date/time fields on the Aliquot Edit page.
- R-19803 Fixed Z-order of LDMS's menu bar.
- R-19973 Fixed alignment of fields on the Change Password page.
- R-20159 Fixed security vulnerability where users with a temporary password were not subject to the lock out rules for successive sign in failures.

LDMS release 19-Mar-2015 (version 1.1)

These are the enhancements made to LDMS release 19-Mar-2015 (version 1.1).

New features

- R-17271 A shipping file can now be re-generated.
- R-20201 New quick add feature. This allows users to quickly add specimens, visits, and even new participants on a single screen. Templates for common visits and draws can be used to automatically fill in some information.
- R-20303 Specimen labels can now be generated in many places throughout LDMS, not just the Labels page.
- R-20836 Added support for the REPRIEVE project.

General improvements

- R-19891 If JavaScript is not enabled or available, you will now see a warning message prior to signing in to LDMS.
- R-20213 Shipping files are now named with simply the shipment number. This improves compatibility with LDMS for Windows.
- R-20710 Added navigation links to improve LDMS's compliance with the Section 508 Amendment to the Rehabilitation Act of 1973.
- R-20908 Added new label format for the REPRIEVE project.

- R-20864 Added check to prevent the creation of shipping files that contain no specimens.
- R-20943 Improved ability to import primary specimens from LDMS for Windows. A feature added to LDMS for Windows version 10.0 allows it to import shipments that contain primary specimens without aliquots by converting the primary into an aliquot. If such a specimen is shipped back to a laboratory using LDMS, the aliquot will now be converted back into a primary.
- R-21091 Changed the way LDMS receives shipping files to ensure compatibility with updated shipping files in the future.
- R-21096 Changed connection timeout time. This helps prevent unnecessary timeouts when using LDMS on a slow Internet connection.
- R-21189 Labels will no longer be generated for unavailable specimens.
- R-21255 Updated LDMS's logo.
- R-21257 To help ensure compatibility with LDMS for Windows, certain data entry fields are now automatically converted to upper case characters.
- R-20255 A dialog window showing the version of assemblies is now available in LDMS in debug builds.
- R-20432 The session timeout for debug builds has been disabled.
- R-20523 Transactions will now have their exportable flag set and will be associated with one or more project IDs.
- R-20647 ASP.NET MVC has been removed as a deployable dependency.

Issues fixed

- R-20121 When receiving a shipping file that contains specimens collected for a project that does not exist at the receiving laboratory, the project will now automatically be created as expected.
- R-20173 Fixed issue where storage locations were sometimes corrupted during shipping file import.
- R-20325 Fixed issue where aliquots could not be seen under certain circumstances when removing an enrollment.
- R-20400 Fixed issue where a primary specimen's availability would be inappropriately changed to available even if it had aliquots when it was received in a shipping file.
- R-20412 Fixed issue where the positions of specimens were not correctly displayed for received CSV shipping files.
- R-20504 Changed language on sign in page to refer to "WebLDMS" instead of "LDMS".
- R-20514 Fixed issue where the application version number was no longer displayed after an unsuccessful sign in attempt.
- R-20572 Fixed issue where draw date was erroneously not marked as required when creating or modifying a visit.

- R-20578 Fixed issue where tooltips did not always appear for certain types of text.
- R-20779 Fixed issue where users that did not have permission to view the Specimen Management page could not access any other pages in LDMS (since the Specimen Management page was the default when signing in).
- R-20865 Fixed issue where Internet Explorer required the user to save between each step when creating a new shipment.
- R-20881 Fixed issue where the *Shipping Container Report* would incorrectly indicate occupied positions in a container as empty.
- R-20906 Corrected reports ported from LDMS for Windows that were using specimen ID for sorting, grouping, or filtering during report generation. This caused issues for specimens added in LDMS for the web since it does not utilize the specimen ID.
- R-20963 Fixed issue where a LDMS for the web shipment sent to a laboratory using LDMS for Windows and then shipped back to a LDMS laboratory could not be received if it included a shipment container using positions-only labeling.
- R-20971 Fixed issue where the shipment temperature in a shipping file was handled in such a way that shipping files could not be imported by LDMS for Windows.
- R-21018 When generating labels, the skip box will now default to zero instead of requiring the user to enter a value (which is typically zero).
- R-21032 Fixed issue where shipments created in LDMS for Windows could not be imported under certain circumstances due to duplicate level and container names.
- R-21057 Fixed issue where co-enrollment information in a CSV shipping file was lost when receiving the shipping file.
- R-21075 Fixed issue where Internet Explorer was not able to display some screens properly when creating a new shipment.
- R-21088 Fixed issue where Internet Explorer needlessly scrolled horizontally in popup windows.
- R-21196 Fixed issue where Internet Explorer version 9 was not able to add specimens to a shipment.
- R-21097 Filters will no longer persist when switching between laboratories.
- R-21099 Fixed issue where receiving a CSV shipping file would fail if the first specimen in the file was a primary specimen.
- R-21194 Fixed issue where shipping files generated by LDMS for Windows could not be received by LDMS under certain circumstances.
- R-21306 Fixed issue where primaries specimens could be inadvertently shown as not stored when trying to make an invalid change to a specimen record.
- R-21331 Fixed issue where drop-down menus would become inaccessible in certain circumstances.
- R-21275 Fixed issue where the `FreezerRemover` and `LevelRemover` classes were erroneously changed to be declared as `BoxRemover`.
- R-21159 Fixed issue where error messages were not being correctly displayed due to an error in the `ErrorLayout` template.

- R-20650 Fixed issue where the `LoginService` class incorrectly compared account lock expiration time as less than or equal to the current time.

Accessibility information

This section describes the accessibility of LDMS and its use with assistive technologies.

LDMS has been designed with the accessibility of everyone in mind. Adherence to Section 508 of the Rehabilitation Act of 1973 is taken into account when planning new features for LDMS and making those features intuitive and useful to the greatest number of people possible.

Since LDMS runs within a web browser, the level of accessibility can vary from browser to browser. To the extent possible, web pages in LDMS are made accessible to screen readers and users that work with assistive technologies. For example, different parts of the user interface provide metadata so that their purpose in the application can be discerned by assistive technology.

Some reports and files generated by LDMS require the use of additional software to open and view. A list of these application can be found in LDMS's system requirements.

If you are experiencing difficult using certain features of LDMS with assistive technology, please contact the Frontier Science Foundation.

Related sections

System requirements on page 10
This section lists the system requirements and recommendations for computers connecting to LDMS.

Contact the Frontier Science Foundation

Terms

additional time
A time stored with a specimen other than its collection, processing, or freezing time, such as the time the specimen was collected since the patient's last medication does or the number of hours that the patient was fasting

additive type
The substance that is mixed in with a specimen that was collected from a patient, such as an anticoagulant; represented in WebLDMS by a 3-letter code

aliquot specimen
A specimen that was created by processing a primary specimen, such as creating double-spun plasma aliquots from a blood primary specimen
Also known as: sub-specimen

availability
A property of a specimen that indicates whether or not the specimen is available at your laboratory for shipping, storage, and testing

Also known as: not available, never store

available volume
The amount of a specimen that is in a state that it can be used, such as the remnants of a primary after it has been processed into aliquots

barcode
A 2D image that contains a specimen's global specimen ID, and can be ready by a 2D barcode reader

batch
A shipment to another laboratory

challenge code
A randomized code generated when you attempt to access certain restricted features in WebLDMS; used by LDMS User Support to determine the response code needed to access the feature.
Also known as: challenge password, lock code

clinic
The site where the visit occurred at which a primary specimen was collected

co-enrolled
A primary specimen that is associated with more than one patient visit or study

specimen condition
A codified, three-letter property assigned to all specimens in WebLDMS that indicates the current condition of the specimen

derivative type
The type of aliquot that was created from a primary specimen, such as a plasma aliquot derived from a blood primary

Data Management Center (DMC)
The branch of Frontier Science that manages clinical and laboratory data for clinical trials, and also develops and maintains laboratory software such as WebLDMS.
Acronyms: DMC

draw date
That date that a primary specimen was collected from a patient

enrollment
A combination of a patient and a protocol

excluded position
A location within a storage item that is intentional left empty for the purpose of helping people determine which end of the storage item is the front

fill order
The logic used to add specimens (or other storage units) to a storage or shipping container when they are automatically added

frozen date
Indicates when a specimen was frozen, typically used to document the moment that the freezing process began

global specimen ID
A unique identifier assigned to all primary specimens and aliquot specimens; aliquot specimens derived from a primary specimen will share the primary's ID, however will have a unique sequence number (such as “-01” for the first aliquot, “-02” for the section aliquot, and so forth)

ID1
A unique identifier for a patient on a specific project; the name and format for an ID1 will vary, depending on the project
Also known as: patient identifier
Abbreviations: PID

protocol
The plan that determines the collection of specimens, types of collections, timelines, etc, such as a study; the label for which is dependent on the project
Also known as: ID2

ID3
A sub-protocol identifier; not used by all projects

label
A small, printed paper with an adhesive back that is placed on a specimen container to help identify its contents

LDMS laboratory ID
A number assigned by Frontier Science that is used to identify a laboratory to other laboratories; can be assigned to laboratories that do and do not use LDMS
Also known as: laboratory ID, labid, laboratory number

LDMS for Windows
A locally installed Windows application developed and maintained by Frontier Science, used by laboratories around the world to create specimen records, track specimen shipment and storage, and submit assay result data.

laboratory information management system (LIMS)
A computer program that is used to manage laboratory data, such as cataloging and shipping specimens.
Acronyms: LIMS

other patient identifier (OPID)
A secondary identifier than can be applied to a patient, typically in addition to an identifier in addition to one defined by the project
Acronyms: OPID

original volume
The initial amount of a specimen, before any processing occurred

other specimen ID
An identifier for a primary specimen that has no rules or validation, and can be manually assigned by a laboratory

patient
The source of a specimen in WebLDMS; typically a person enrolled in a study
Also known as: participant, source

preset project
A project in LDMS that cannot be modified by users, and has requirements and rules that are built into LDMS.

primary specimen
The raw specimen that is collected from a patient during a visit; the specimen from which aliquots are created
Also known as: primary

primary type
The kind of primary specimen that was collected from a patient, such as blood; represented in WebLDMS as a 3-letter code

processing date
The date that a primary specimen was processed into aliquot specimens

project
The larger clinical trial, government group, or research organization in which a participant is enrolled

reason specimen not collected
The reason that an expected primary specimen was not collected from a patient during a visit

received date
The date that a primary specimen was received by a laboratory from the collection site where the visit occurred

response code
A password provide to you from LDMS User Support to access a feature that is restricted with a challenge code.
Also known as: challenge code, challenge password

shipped
A status for a specimen that was once considered at your laboratory, but has since been added to a shipping file and sent to another laboratory

shipping file
A data file generate by WebLDMS that contains data for specimens being shipped to another laboratory
Also known as: shipping data file

sort order
How specimens are sorted before they are put into a shipping container

specimen ID
An identifier that was assigned to primary specimens and aliquot specimens by LDMS and other laboratory data systems; WebLDMS using global specimen ID instead

specimen record
A collection of information for a specific derived specimen produced from a collected specimen for a particular participant visit

storage container
The storage item in the WebLDMS storage system that contains specimens, such as a box.
Also known as: box

storage level
An intermediary item in the WebLDMS storage system, such as a shelf within a freezer or a rack on a shelf
Also known as: level

storage unit
The highest level in the WebLDMS storage system, such as a freezer
Also known as: freezer

stored
Whether or not a specimen has been assigned a storage location in WebLDMS

sub-level
On the Storage page, a storage level that is within another storage level

storage template
A storage item, such as a container, that is set up in WebLDMS in advance so that it can be used as the basis of creating new storage items.

thaw count
The number of times that a specimen has been removed from cold storage

visit
An event at which a specimen is collected from a patient, comprised of a visit unit and visit value

visit unit
For a visit, the type of visit, such as the week number, ex. 1 WK, where “wk” is the visit unit

visit value
For a visit, an identifier that represents the step or sequence of the visit within a protocol, such as the week number, ex. 1 WK, where “1” is the visit value

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